

Caviar Report to the European Commission

Part I.

Engler, M & Knapp, A. (2008). *Briefing On the Evolution of the Caviar Trade and Range State Implementation of Resolution Conf. 12.7 (Rev. Cop 14)*. A TRAFFIC Europe Report for the European Commission, Brussels, Belgium.

Part II.

UNEP-WCMC (2008). *Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database*. A Report to the European Commission. UNEP-WCMC, Cambridge.

This report was prepared in two parts by TRAFFIC and UNEP-WCMC for the European Commission. Part I, prepared by TRAFFIC, examines trends in the reported legal caviar trade globally and in the EC since the listing of all *Acipenseriformes* in 1998, based on reported import and export data from the CITES Trade Database, as well as examining the illegal trade in caviar in the EC through seizures reported in EU-TWIX. Additionally, the briefing focuses on the implementation in main caviar range States of the main measures set out in *CITES Resolution Conf. 12.7 (Rev. CoP14)*, including the labelling of caviar containers, registration of processing, (re-)packaging, and exporting facilities, and range State communication of this registration information to the CITES Secretariat. Part I also presents a brief overview of issues examined in more detail in Part II, including range State quota compliance and requirements regarding the provision of copies of export permits and re-export certificates for the inclusion in the UNEP-WCMC Caviar Database.

Part II, produced by UNEP-WCMC, includes a brief summary of EC caviar trade trends and takes a species-based approach to assessing EC imports and range State quota compliance. Results of tracking caviar permits held within the UNEP-WCMC Caviar Database are presented to highlight any incidences of potentially illicit trade. Finally, compliance with the permit reporting requirements of *Resolution Conf. 12.7 (Rev. CoP14)* is assessed in depth for EC Member States and main exporting range States. Parts I and II are presented together as a comprehensive overview of the caviar trade both globally and within the European Community.

PART I.

BRIEFING ON THE EVOLUTION OF THE CAVIAR TRADE AND RANGE STATE IMPLEMENTATION OF CITES *RESOLUTION CONF. 12.7 (REV. COP 14)*

Maylynn Engler and Amelie Knapp

October 2008

Report prepared for the European Commission,

Contract 070307/2007/479422/MAR/E2



TRAFFIC
the wildlife trade monitoring network

Report prepared by TRAFFIC Europe for the European
Commission under Contract
070307/2007/479422/MAR/E2

All material appearing in this publication is copyrighted
and may be reproduced with permission. Any
reproduction in full or in part of this publication must
credit the European Commission as the copyright
owner.

The views of the authors expressed in this publication
do not necessarily reflect those of the European
Commission or the TRAFFIC network, WWF or IUCN.

The designation of geographical entities in this
publication, and the presentation of the material, do not
imply the expression of any opinion whatsoever on the
part of the European Commission, TRAFFIC or its
supporting organizations concerning the legal status of
any country, territory, or area, or its authorities, or
concerning the delimitation of its frontiers or
boundaries.

The TRAFFIC symbol copyright and Registered
Trademark ownership is held by WWF. TRAFFIC is a
joint programme of WWF and IUCN.

Suggested citation: Engler, M & Knapp, A. (2008).
*Briefing on the evolution of the caviar trade and range State
implementation of Resolution Conf. 12.7 (Rev. CoP14). A
TRAFFIC Europe Report for the European
Commission, Brussels, Belgium.*

CONTENTS

| | |
|------------------------------------------------------------------------------------------|-----------|
| ACKNOWLEDGEMENTS..... | 5 |
| INTRODUCTION..... | 6 |
| METHODS..... | 8 |
| Sturgeon wild catch and aquaculture production in range States | 8 |
| Evolution of the caviar trade | 8 |
| <i>Legal trade in caviar</i> | <i>8</i> |
| <i>Illegal trade in caviar in the EU.....</i> | <i>9</i> |
| Range State compliance with Resolution Conf. 12.7 (Rev. CoP14) | 9 |
| STURGEON WILD CATCH AND AQUACULTURE PRODUCTION IN RANGE STATES..... | 10 |
| EVOLUTION OF THE CAVIAR TRADE..... | 12 |
| The legal trade in caviar | 12 |
| <i>Import trends.....</i> | <i>12</i> |
| <i>Export trends.....</i> | <i>15</i> |
| <i>Re-export trends</i> | <i>19</i> |
| <i>Trade routes into the EU.....</i> | <i>22</i> |
| <i>Exports and quotas.....</i> | <i>25</i> |
| <i>Value of the caviar trade.....</i> | <i>27</i> |
| Caviar seizures in the EU | 29 |
| RANGE STATE COMPLIANCE WITH RESOLUTION CONF. 12.7 (REV. COP14) | 32 |
| Registration of licensed facilities for caviar export, processing and repackaging | 32 |
| Range State reporting to Secretariat on the issuance of CITES permits | 33 |
| Caviar labelling..... | 33 |

SUMMARY AND CONCLUSIONS 36

General trends..... 36

Sturgeon quantities 36

Caviar quantities 36

Value of the caviar trade..... 37

CITES quotas for caviar 37

Exports of caviar by sturgeon species..... 38

Caviar seizures in the EU..... 38

Registration of caviar processing and (re)packaging facilities 38

Recommendations 39

**ANNEX 1: RANGE STATE REPORTED EXPORTS COMPARED TO CITES
EXPORT QUOTAS 1998-2006 41**

ANNEX 2: CITES RESOLUTION CONF. 12.7 (REV. COP 14)..... 42

ACKNOWLEDGEMENTS

This project has been realized within the framework of the service contract 070307/2007/479422/MAR/E2 with the European Commission. The authors would like to thank the CITES Secretariat, John Caldwell of UNEP-WCMC, as well as TRAFFIC colleagues Steven Broad, Richard Thomas and Rob Parry-Jones for reviewing this report.

INTRODUCTION

Caviar is produced from the roe of sturgeon and paddlefish, in the Acipenseriformes family. There are 27 species of Acipenseriformes, including 25 sturgeon species and 2 paddlefish species. This briefing will focus mainly on the Eurasian species from which significant quantities of caviar are produced and found in international trade. These include sturgeons from the Caspian basin; the Russian Sturgeon *Acipenser gueldenstaedtii*, Fringebarbel Sturgeon *A. nudipectus*, Persian Sturgeon *A. persicus*, Sterlet *A. ruthenus*, Stellate Sturgeon *A. stellatus*, and Beluga *Huso huso*, as well as the two Amur River sturgeon species Amur Sturgeon *A. schrenckii* and Kaluga *H. dauricus*.

Populations of wild sturgeon have declined over the course of the 20th century and continue to be under significant threat from a variety of factors such as overexploitation, poaching and illegal trade, habitat destruction, migratory barriers and pollution of waterways¹. In 1997, all species of sturgeon and paddlefish were listed in the CITES Appendices. Since this listing came into force in April 1998, all CITES Parties have been required to report their trade in specimens of Acipenseriformes, including caviar, in their CITES Annual Reports.

The purpose of this briefing document is to illustrate the evolution of the caviar trade since 1998, and to assess the implementation of certain measures by selected range States, as laid out in *Resolution Conf. 12.7 (Rev. CoP14)*, on the conservation of and trade in sturgeons. Selected range States have been chosen based on significant reported quantities of wild caviar exported from those countries since 1998.

This briefing illustrates the reported wild catch and aquaculture production of sturgeon in range States, and presents an overview of the analysis of CITES trade data for the legal caviar trade into the EU, including information about the main EU importers, main countries of origin, main trade routes and the source of the caviar (e.g. whether sourced from the wild or from aquaculture). Additionally, exports of caviar by range States as reported to the CITES Trade Database are compared with CITES export quotas, to assess whether any range States have exceeded their quotas.

This briefing also presents information on caviar seizures in the EU, in order to identify Member States in which the most seizures have taken place and the main countries from which illegally-traded caviar is entering, or is destined for, the EU.

Information has also been compiled on the main measures implemented by major range States relating to the caviar trade as detailed in *CITES Resolution Conf. 12.7 (Rev. CoP14)*, focusing on the labelling of caviar containers, registering of legal exporters and processing plants including aquaculture operations and repackaging plants. In 2000, a universal caviar labelling system was introduced through *Resolution Conf. 12.7 (Rev. CoP14)*, requiring range States to implement a uniform marking system for caviar containers, using non-reusable labels. Since 2002, *Resolution Conf. 12.7 (Rev. CoP14)* has been amended to require range States to register processing and repackaging plants in their territories and provide a list of these facilities and their official registration codes to the Secretariat. Also since 2002, it has been obligatory for CITES Parties not to accept the import of sturgeon species from stocks shared between different range States unless export quotas have been established for that year by the range States concerned and have been communicated by the Secretariat to the Parties.

¹ Ludwig, A. (2008). Identification of Acipenseriformes species in trade. *Journal of Applied Ichthyology*, 24 (Suppl. 1), pp. 2-19.

As of 2000, range States have also been required under *Resolution Conf. 12.7 (Rev. CoP14)* to provide copies of each export permit for caviar to the Secretariat, and to the UNEP-WCMC Caviar Database after its launch in November 2007. This briefing also presents a compilation of information on the provision of copies of all export permits and re-export certificates by range States to the CITES Secretariat or UNEP-WCMC, for the inclusion in the UNEP-WCMC Caviar Trade Database and whether this has occurred within specified deadlines.

UNEP-WCMC has produced a complementary caviar report for the European Commission which is presented as Part II to this briefing, using the UNEP-WCMC Caviar Database to access detailed caviar information, including data in the Caviar Database that is not publicly available, undertaking permit by permit analysis to investigate any discrepancies, a detailed analysis of quota compliance, and the identification of potential illegitimate use of CITES export permits based on information in the Caviar Database. Where information in the UNEP-WCMC report complements that which is presented here, references to the UNEP-WCMC report *Analysis of EC Trade in Caviar by Species and Identification of Potential Illegitimate Uses of CITES Permits* are provided (hereafter referenced as UNEP-WCMC, 2008).

METHODS

Sturgeon wild catch and aquaculture production in range States

Wild catch and aquaculture production quantities of sturgeon for main range States² exporting caviar were derived from the FAO Fishstat Plus database for the years 1998-2006. Figures are reported in tonnes.

Evolution of the caviar trade

Legal trade in caviar

For the purposes of this briefing, the term caviar was interpreted as per the definition given in *Resolution Conf. 12.7 (Rev. CoP14)*, which defines caviar as the processed unfertilized eggs (roe) of *Acipenseriformes* species. An analysis of trade data from the CITES Trade Database was conducted for reported caviar trade into the EU-27³ from 1998 to 2006, the most recent year for which comprehensive data are available. Since the listing of sturgeon species in CITES Appendix II only came into effect on 1 April 1998, trade data for 1998 only cover April-December 1998. Only data with the import term “eggs”, and only units of grams (converted to kg for consistency) or kilograms (kg) were included. This excludes live, fertilized eggs used for aquaculture purposes as these are generally classified as “eggs (live)”. Additionally, data with the source code for confiscated or seized specimens (I), pre-Convention specimens (O), and source unknown (U) were excluded. The source codes for animals and parts or derivatives thereof which were bred in captivity (C) or born in captivity (F), and specimens originating in a ranching operation (R), were grouped into the term “C” to include all caviar produced in aquaculture operations.

Data were analysed to determine the main EU importers, and main countries of origin for wild caviar and caviar produced from aquaculture, main trade routes into the EU, the source of reported caviar imports (whether wild or aquaculture), and trade trends from 1998-2006 for wild caviar and caviar produced from aquaculture both globally and focusing on reported EU imports. Reported exports from main range States were compared with EU import records, and also with CITES export quotas for these years. Since 2000 was the first year that caviar export quotas were implemented under CITES, caviar export quotas are only available for 2001 onwards.

An analysis was also conducted to determine trends in the reported import value of caviar, using data derived from the external Trade Database of Eurostat, using the CN8⁴ commodity code for caviar. The EU-27 grouping was used to determine the total reported import value to the EU, as well as reported import value from outside the EU (extra-EU trade) and within the EU (intra-EU trade).

² I.e. range States with the highest global exports of caviar in recent years: Azerbaijan, China, the Islamic Republic of Iran (referred to hereafter as “Iran”), Kazakhstan, and the Russian Federation.

³ The EU-27 was used for all analyses, and for the purposes of this document will be referred to simply as the EU.

⁴ CN8 codes are 8-digit Combined Nomenclature (CN) Customs codes, which are used to classify different categories of Customs commodities.

Illegal trade in caviar in the EU

Information on reported caviar seizures in the EU was compiled from the EU-TWIX³ database, for the years 1998-2006. Data with the description “CAV”, and units of mass (in kg) were analysed.

This analysis of illegal trade in caviar in the EU focused on total seizures per year in the EU, as well as Member States in which the most seizures have taken place, and the main countries of origin for caviar seized in the EU. Species of sturgeon for which the most seizures have been reported were identified, as well as the most common routes between country of origin and Member State of destination.

It should be noted that trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort, in their reporting efficiency to EU-TWIX, and in addition methods of entering seizure data can vary among Member States (e.g. some data are not recorded at the species level).

Range State compliance with Resolution Conf. 12.7 (Rev. CoP14)

To determine range State compliance with the recommendations of *Resolution Conf. 12.7 (Rev. CoP14)* on the conservation of and trade in sturgeons and paddlefish, information on registration of caviar exporting, processing, and repackaging facilities in range States was compiled from the *CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish*, at http://www.cites.org/common/resources/reg_caviar.pdf, consulted on 23 May, 2008.

The CITES Secretariat was consulted in order to determine which of these range States have taken administrative and legal measures to allow for the labelling of caviar processed, packaged, or re-packaged in their country. Information was similarly obtained on whether one or several labels have been designed for these range States.

Additionally, information was obtained through consultation with UNEP-WCMC on whether range States have been submitting export permits and re-export certificates to UNEP-WCMC or the Secretariat, for the inclusion in the UNEP-WCMC Caviar Database as required under *Resolution Conf. 12.7 (Rev. CoP14)*.

³ EU-TWIX is the European Union Trade in Wildlife Information Exchange, a database and mailing list developed as a tool to facilitate information exchange and international co-operation between law enforcement officials across the EU.

STURGEON WILD CATCH AND AQUACULTURE PRODUCTION IN RANGE STATES

Range State wild catch, or capture production, of sturgeon from 1998-2006 is illustrated in Table 1. Aquaculture production of sturgeon is given in Table 2. These tables give a general overview of quantities of sturgeon caught and produced by aquaculture in main range States (where data is available), however it should be noted that these quantities refer to all sturgeon caught or produced, rather than being limited to quantities caught or produced for caviar.

There is a significant difference between quantities of wild catch compared with quantities of sturgeon produced by aquaculture, with the latter being significantly greater. In addition, sturgeon wild catch has significantly decreased in quantity since 1998, in the majority of cases (Table 1). Conversely, aquaculture production in European inland waters has greatly increased over the same time-period, although the data do not indicate quantities at the species level and are unavailable for Asian aquaculture of sturgeon prior to 2003 (Table 2).

Wild catch data were unavailable for Kazakhstan from 1998-2004, and for China for the entire 1998-2006 time period (Table 1). While Azerbaijan has historically reported small quantities of caviar produced from aquaculture (e.g. pre-1998), no caviar aquaculture production was reported from 1998-2006 (Table 2). For China, data on caviar aquaculture production were unavailable until 2003 onwards (Table 2). For the Russian Federation, aquaculture production was reported for both freshwater (European inland waters) and marine (Mediterranean and Black Sea) environments, however the vast majority of Russian caviar from aquaculture was produced in the freshwater environment, with marine aquaculture production only reported in 1999 (Table 2).

Table 1: Sturgeon wild catch in main range States, by quantity (t) 1998-2006

| Range State | Species | Fishing area | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------|----------------------------------|-----------------------------|------|------|------|------|------|------|------|------|------|
| Azerbaijan Iran | <i>Acipenseridae</i> spp. | Asia – Inland waters | 61 | 69 | 70 | 76 | 76 | 105 | 89 | 85 | 9 |
| | <i>Acipenseridae</i> spp. | Asia – Inland waters | 1200 | 1000 | 1000 | 870 | 643 | 463 | 500 | 411 | 330 |
| | <i>Huso huso</i> | Asia – Inland waters | | | | | 58 | 64 | 6 | 2 | 36 |
| Kazakhstan | <i>Acipenser nudiiventris</i> | Asia – Inland waters | | | | | | | | 1 | 1 |
| | <i>Acipenser stellatus</i> | Asia – Inland waters | | | | | | | | 4 | 84 |
| | <i>Acipenseridae</i> spp. | Asia – Inland waters | 270 | 240 | 215 | 282 | 185 | 196 | 232 | 227 | 55 |
| Russian Federation | <i>Huso huso</i> | Europe – Inland waters | 78 | 40 | 44 | 40 | 32 | 24 | 13 | 17 | 8 |
| | <i>Acipenser gueldenstaedtii</i> | Europe – Inland waters | 646 | 359 | 250 | 251 | 219 | 189 | 121 | 139 | 69 |
| | <i>Acipenser stellatus</i> | Europe – Inland waters | 336 | 234 | 176 | 172 | 136 | 113 | 29 | 38 | 10 |
| | <i>Acipenser ruthenus</i> | Europe – Inland waters | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |
| | | Europe – Inland waters | 169 | 118 | 124 | 133 | 69 | 56 | 77 | 41 | 41 |
| | <i>Acipenseridae</i> spp. | Mediterranean and Black Sea | 284 | 181 | 54 | 18 | 15 | 8 | 3 | 2 | 2 |

Note: Blanks or omissions indicate no data available.

Source: Derived from FAO Fishstat Plus database

Table 2: Sturgeon aquaculture production in main range States, by quantity (t) 1998-2006

| Range State | Species | Fishing area | Environment | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------|---------------------------|---------------------------|-------------|------|------|------|------|------|--------|--------|--------|--------|
| Azerbaijan | <i>Acipenseridae</i> spp. | Asia – Inland waters | Freshwater | - | - | - | - | - | - | - | - | - |
| China | <i>Acipenseridae</i> spp. | Asia – Inland waters | Freshwater | | | | | | 10 871 | 11 269 | 15 407 | 17 424 |
| | | Europe – Inland waters | Freshwater | 1100 | 1560 | 2050 | 1800 | 2100 | 2208 | 2400 | 2470 | 2100 |
| | <i>Acipenseridae</i> spp. | Mediterranean & Black Sea | Marine | - | 10 | - | - | - | - | - | - | - |

Note: Blanks or omissions indicate no data available, “-” indicates zero quantity.

Source: Derived from FAO Fishstat Plus database

EVOLUTION OF THE CAVIAR TRADE

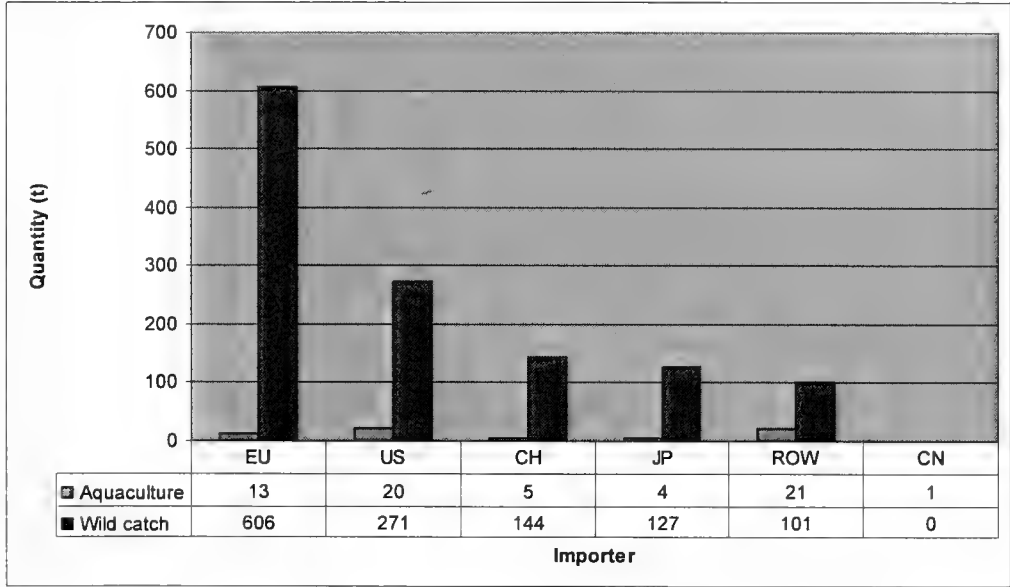
The legal trade in caviar

The following tables and graphs illustrate the legal reported global and EU trade of caviar from 1998-2006. All tables and figures in this section are derived from caviar data taken from the CITES Trade Database.

Import trends

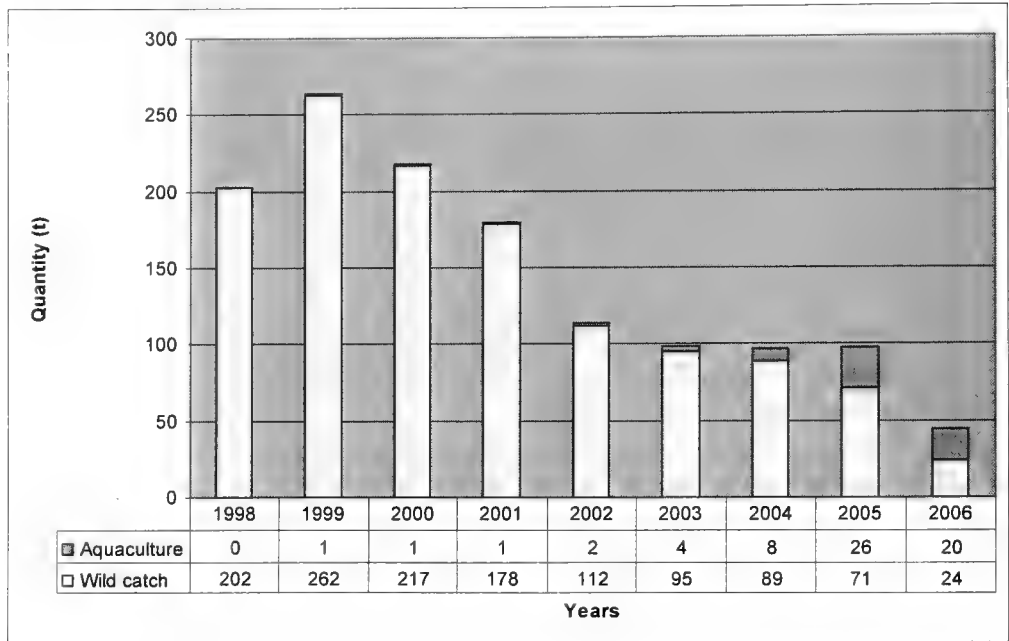
The 27 EU Member States as a group represent the largest global importer of legal caviar, considering total tonnes (t) imported from 1998-2006 (Fig. 1). Over 97% of the EU's reported caviar imports were sourced from the wild. After the EU, the US, Switzerland, and Japan are the next largest importers.

Fig. 1: Reported imports of caviar from wild catch and aquaculture production by importer and source code (t), 1998-2006



EU = EU-27, US = USA, CH = Switzerland, JP = Japan, RoW = Rest of World, CN = China.
Source: Data derived from the CITES Trade Database.

Fig. 2: Reported annual global caviar imports, wild vs. aquaculture (t), 1998-2006



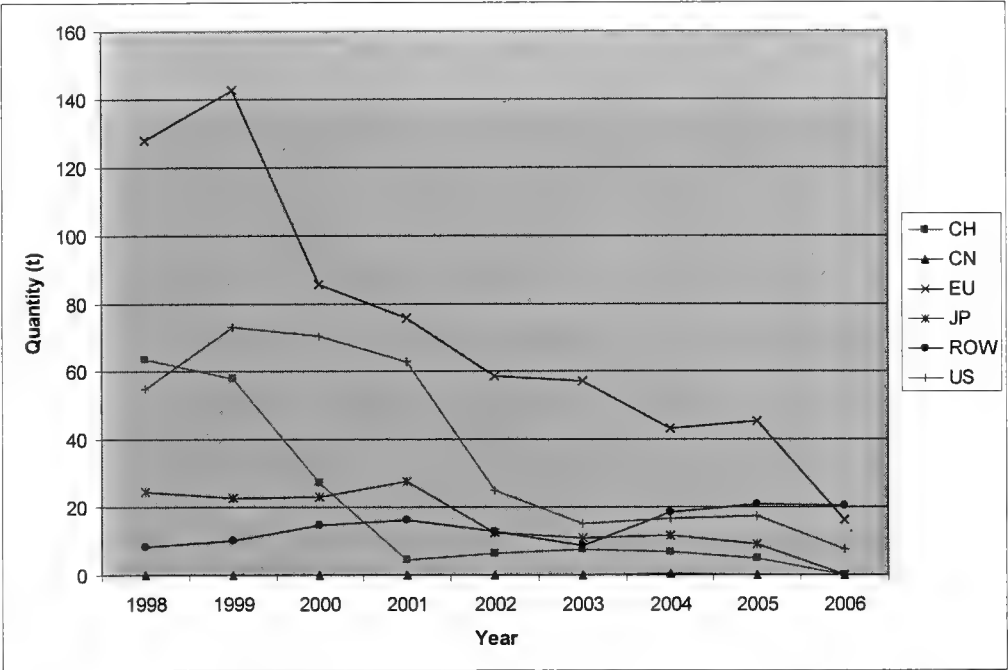
Source: Data derived from the CITES Trade Database.

Despite an increase in reported global imports of caviar from aquaculture, reported global caviar imports have declined from 1999-2006 (Fig. 2). Between 2001 and 2005, reported global imports of caviar from aquaculture have at least doubled every year (Fig. 2). Reported quantities of caviar from aquaculture in trade in 2006 were somewhat lower than in 2005, but this may be due to late reporting of 2006 trade data. Data for 2006 should be verified in 2009 or once data for more recent years are available, to determine whether this has been the case. It would also be interesting to see if this trend continues after 2006, when caviar trade data for 2007 and 2008 become available. It should be noted that trade in caviar produced from aquaculture within the EU and that is not exported outside of the EU would not appear in international trade data, because of the absence of internal border controls.

This increase in the reported trade in caviar from aquaculture is consistent with the increasing trend in reported sturgeon aquaculture production (see Table 2, p. 11).

Reported caviar imports to the EU and to other major importers have significantly decreased in quantity from 1998 to 2006 (Fig. 3).

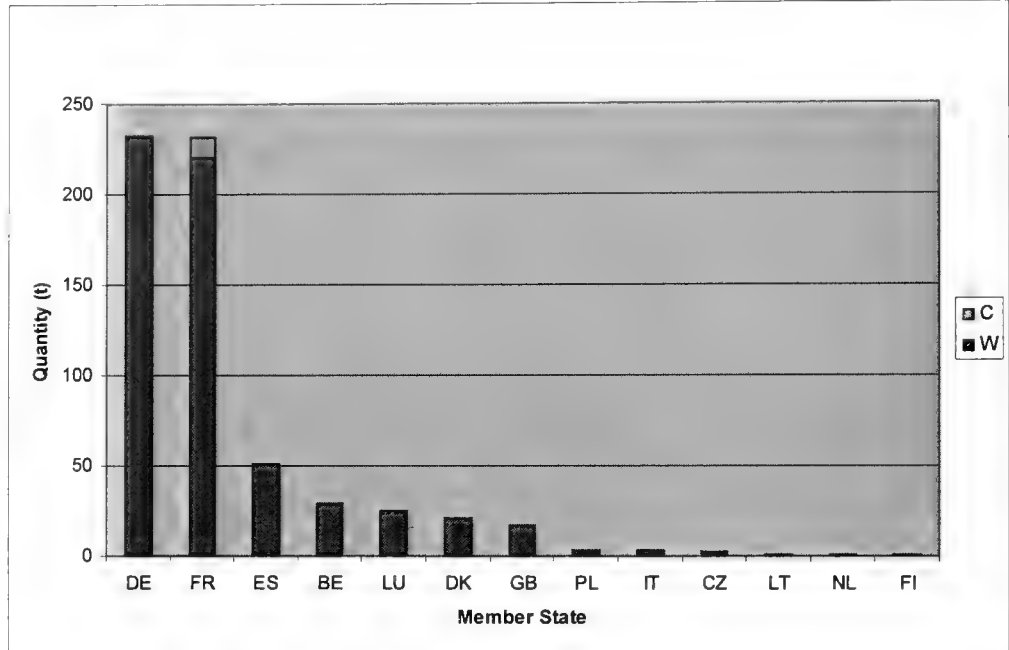
Fig. 3: Reported imports of caviar from wild catch and aquaculture production by importer and year (t), 1998-2006



CH = Switzerland, CN = China, EU = EU-27, JP = Japan, RoW = Rest of World, US = USA.
Source: Data derived from the CITES Trade Database.

Within the EU, Member States that have imported the largest quantities of caviar from 1998-2006 are Germany and France, together accounting for about 75% of all reported EU imports, followed by Spain, and Belgium (Fig. 4). Almost all of these reported imports are of wild-sourced caviar, although France has the highest volume of reported imports of caviar produced by aquaculture, at 11 t.

Fig. 4: EU Member State reported caviar imports by quantity and source code, (t), 1998-2006



DE = Germany, FR = France, ES = Spain, BE = Belgium, LU = Luxembourg, DK = Denmark, GB = United Kingdom, PL = Poland, IT = Italy, CZ = Czech Republic, LT = Latvia, NL = The Netherlands, FI = Finland. C = caviar from aquaculture, W = wild catch.

Note: Country omissions indicate zero quantity.

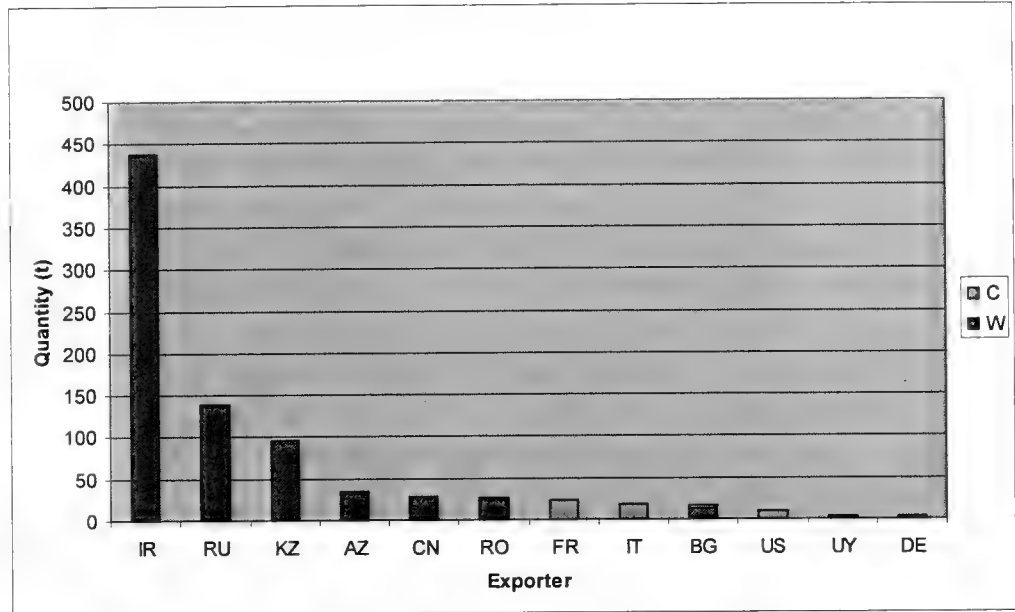
Source: Data derived from the CITES Trade Database.

Export trends

The main direct exporters of wild and aquaculture-derived caviar, according to exporter records, are the Caspian States: Iran, the Russian Federation, Kazakhstan and Azerbaijan (Fig. 5). Iran is by far the largest global exporter of wild caviar at 438 t, with no reported exports of caviar from aquaculture. The Russian Federation (138 t), Kazakhstan (95 t) and Azerbaijan (35 t) are the next three largest exporters by quantity, also with no reported direct exports of caviar from aquaculture.

The main direct exporters globally of caviar derived from aquaculture operations are France (23 t), Italy (17 t), and the USA (9 t) (Fig. 5).

Fig. 5: Direct exports by reported exports (t), 1998-2006



IR = Iran, RU = Russian Federation, KZ = Kazakhstan, AZ = Azerbaijan, CN = China, RO = Romania, FR = France, IT = Italy, BG = Bulgaria, US = USA, UY = Uruguay, DE = Germany.

C = caviar from aquaculture, W = wild catch.

Note: Country omissions indicate zero quantity.

Source: Data derived from the CITES Trade Database.

Direct caviar exports reported by species, range State, and year are presented in Table 3. More detailed information by species is presented in UNEP-WCMC, 2008. The Russian Federation had the highest total quantity of reported exports of caviar from *A. gueldenstaedtii*. Kazakhstan had the highest total export quantity of caviar from *A. nudiiventris*, although exports from this species were only reported over a three-year period from 2000-2002, in both exporter and importer records. For *A. persicus*, Iran was the only range State with reported direct exports of this species, and has exported a total of 202 402 kg from 1998-2005. China had the highest total of reported direct exports of *A. schrenckii*. Iran had the highest reported exports of *Acipenser* spp. (which is mixed, pressed caviar) and is the only range State to have traded this product in any significant quantities. Iran also had the highest total reported export quantity of *A. stellatus*, followed by the Russian Federation and then Kazakhstan, although if only exporter records are considered, Kazakhstan reported more exports than the Russian Federation, who did not report exports of any species after 2001. Similarly, China had the highest reported total quantity of caviar exports from *H. dauricus* based on exporter records only, however when importer records are considered, the Russian Federation appears to have exported a higher quantity than China. Finally, for *H. huso*, Kazakhstan had the highest reported exports of caviar from this species, followed closely by Iran.

Table 3: Direct reported exports of wild caviar by taxon and exporter, 1998-2006 (kg)

| Taxon | Exporter | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total |
|----------------------------------------|----------|----------------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|
| <i>Acipenser gueldenstaedtii</i> | AZ | | 2 | 605 | 2047 | 1846 | 3695 | 4783 | 5732 | 18 709 |
| | IR | 44 225 | 9053 | 6134 | 1793 | 2364 | 1696 | 587 | 59 | 65 911 |
| | KZ | | 44 | 3728 | 3838 | 5150 | 1758 | 1873 | 3911 | 20 303 |
| | RU | 30 398 | 25 187 | 18 341 | 8152 | 5627 | 3648 | 2413 | | 93 766 |
| <i>Acipenser gueldenstaedtii</i> Total | | 74 623 | 34 285 | 28 808 | 15 830 | 14 987 | 10 797 | 9656 | 9702 | 198 688 |
| <i>Acipenser nudiventris</i> | IR | 11 | | | 916 | 83 | | | | 1010 |
| | KZ | | | 1691 | 2417 | 596 | | | | 4704 |
| | IR | 11 | 0 | 1691 | 3333 | 678 | 0 | 0 | 0 | 5714 |
| | | 2270 | 44 380 | 30 886 | 40 001 | 34 545 | 39 019 | 10 637 | 665 | 202 402 |
| <i>Acipenser persicus</i> Total | | 2270 | 44 380 | 30 886 | 40 001 | 34 545 | 39 019 | 10 637 | 665 | 202 402 |
| <i>Acipenser schrenckii</i> | CN | 1452 | 3297 | 25 | 2620 | 1756 | 1126 | 914 | 726 | 11 916 |
| | RU | 1385 | 2976 | 1774 | 837 | 813 | 56 | 500 | | 8340 |
| | IR | 2837 | 6273 | 1799 | 3457 | 2569 | 1182 | 1414 | 726 | 20 256 |
| | | 9212 | 2106 | | 860 | 916 | 705 | 400 | 280 | 14 478 |
| <i>Acipenser</i> spp. | RU | 75 | 9 | 53 | 32 | 29 | 2 | 3 | | 203 |
| | AZ | 9287 | 2115 | 53 | 892 | 944 | 707 | 403 | 280 | 14 682 |
| | IR | | | 305 | 817 | 1278 | 3510 | 4849 | 3744 | 14 504 |
| | KZ | 34 616 | 41 599 | 23 802 | 25 043 | 9683 | 7733 | 1954 | 87 | 144 516 |
| <i>Acipenser stellatus</i> | RU | 17 287 | 15 103 | 9419 | 13 453 | 13 542 | 694 | 7758 | 13 912 | 69 187 |
| | CN | 51 903 | 56 702 | 44 321 | 58 022 | 35 679 | 18 775 | 17 791 | 17 743 | 300 936 |
| | RU | 3381 | 3547 | 25 | 4110 | 2433 | 1179 | 1219 | 845 | 16 740 |
| | | 2758 | 3633 | 5452 | 5155 | 1866 | 185 | 570 | 648 | 20 266 |
| <i>Huso dauricus</i> Total | | 6139 | 7179 | 5477 | 9265 | 4299 | 1364 | 1789 | 1493 | 37 006 |
| <i>Huso huso</i> | AZ | | 3 | 146 | 147 | 332 | 562 | 291 | 373 | 1854 |
| | IR | 1926 | 3530 | 3454 | 6082 | 2641 | 2566 | 791 | 18 | 21 009 |
| | KZ | | 867 | 6779 | 7136 | 3473 | 1084 | 693 | 4603 | 24 635 |
| | RU | 1840 | 451 | 2172 | 894 | 910 | 673 | 273 | 2 | 7216 |
| <i>Huso huso</i> Total | | 3767 | 4851 | 12 550 | 14 258 | 7357 | 4885 | 2049 | 4996 | 54 713 |
| Grand Total | | 150 837 | 155 786 | 125 586 | 145 058 | 101 058 | 76 729 | 43 737 | 35 604 | 834 397 |

Note: Where exporter records were not available, importer records are used—these figures are in italics. Blanks indicate no importer or exporter records available.

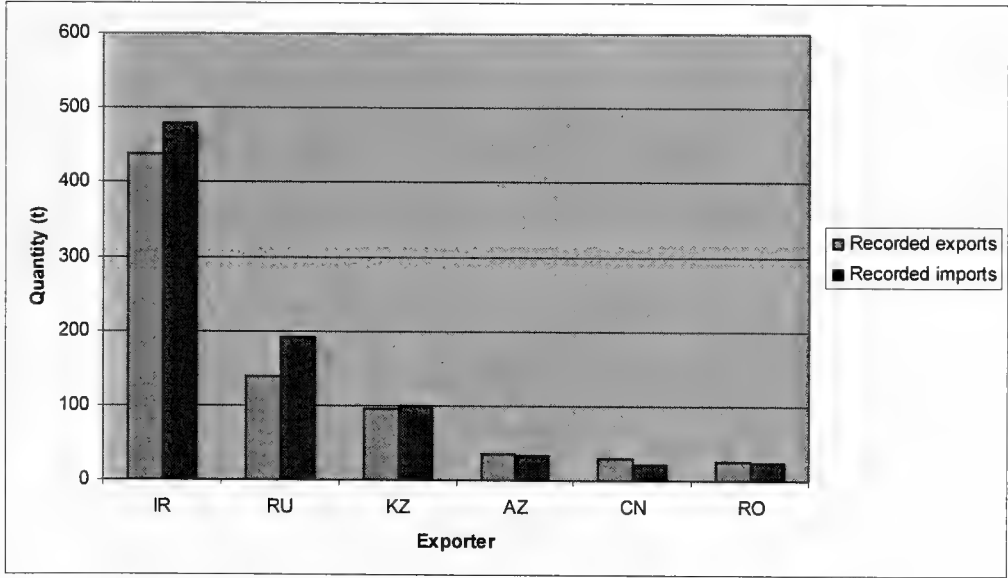
Source: Adapted from the CITES Trade Database.

When total exports of wild caviar reported by direct exporting countries, versus those reported by direct importing countries are compared, there are some discrepancies in amounts declared in trade, as shown in Fig. 6. For Iran and the Russian Federation, importing countries have reported more caviar in trade from these countries than Iran and the Russian Federation have reported as exported. In the case of the Russian Federation, these discrepancies are likely a result of the Russian Federation not reporting exports of caviar after 2001 (Annex 1). Although the Russian Federation has submitted Annual Reports over this time period, it is unknown why exports have not been reported.

Significant quantities are concerned, with discrepancies of 41 t from Iran and 54 t from the Russian Federation from 1998-2006. Given that countries should not be importing more than the quantity stated on the export permit, it is unclear as to how these discrepancies could have occurred. While these discrepancies may suggest that illegal trade could be occurring, it is also possible that lower amounts of exports are reported by exporting countries, compared to importing countries, for other reasons such as the inconsistent or erroneous recording of mass between Customs in different countries, purposeful under-declaration of quantities exported in order to incur lower tariff rates or duties, or the failure of exporting countries to report exports for certain years.

Reported imports from Kazakhstan are also slightly higher, however for Azerbaijan, China and Romania importer records show lower quantities than export records. This may be as a result of importing countries incorrectly reporting imports; however the amounts concerned (2-7 t) are much lower quantities than the discrepancies for Iran and the Russian Federation.

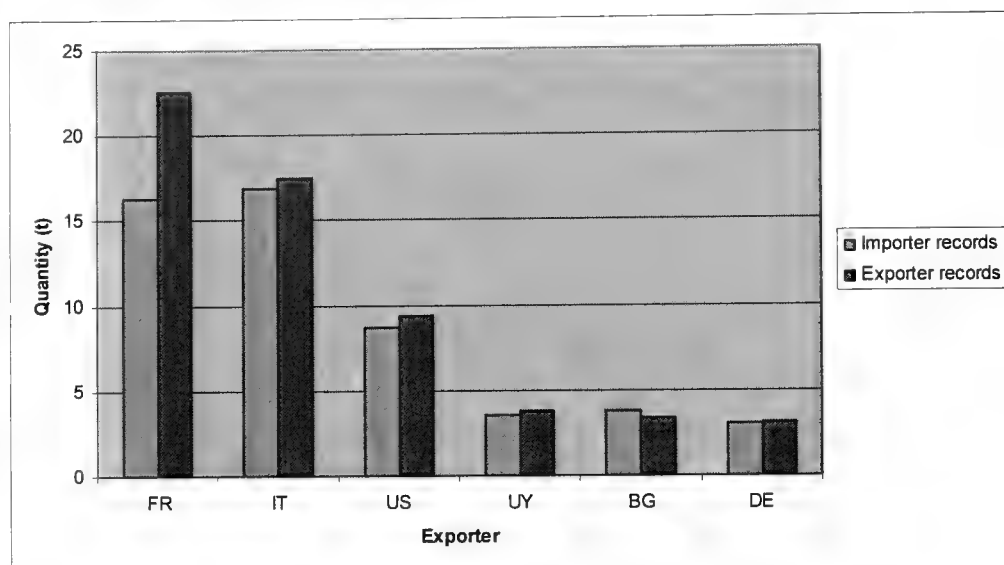
Fig. 6: Direct reported exports of wild caviar from main exporters, based on import vs. export records (t), 1998-2006



IR = Iran, RU = Russian Federation, KZ = Kazakhstan, AZ = Azerbaijan, CN = China, RO = Romania.
 Note: Country omissions indicate zero quantity.
 Source: Data derived from the CITES Trade Database.

For reported direct exports of caviar from aquaculture operations, quantities in trade are much smaller (Fig. 7). France as a caviar exporter shows the greatest difference between quantities reported in exporter records vs. importer records, at 7 t.

Fig. 7: Reported direct exports of caviar from aquaculture operations (t), 1998-2006



FR = France, IT = Italy, US = USA, UY = Uruguay, BG = Bulgaria, DE = Germany.

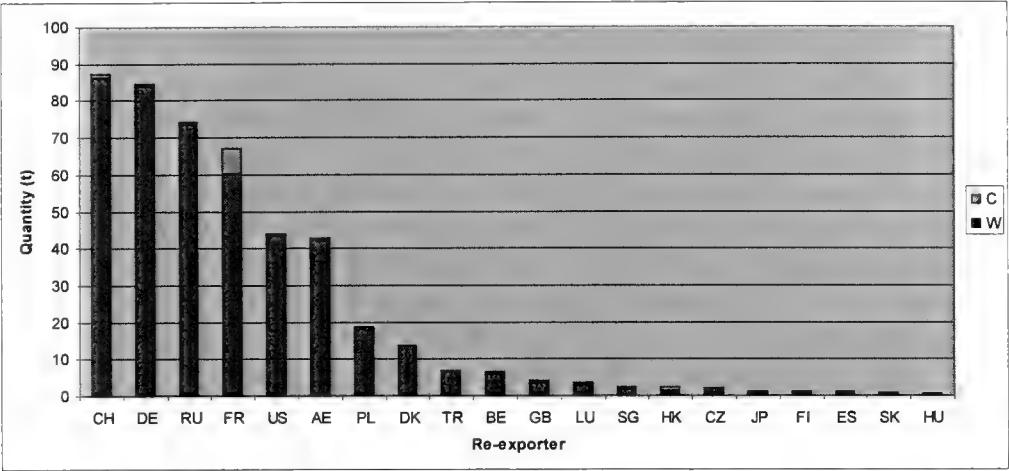
Note: Country omissions indicate zero quantity.

Source: Data derived from the CITES Trade Database.

Re-export trends

Fig. 8 shows that Switzerland, Germany, the Russian Federation, France and the USA are the top re-exporters of caviar from 1998-2006, according to re-export records. Although the vast majority of reported re-exports are caviar from wild sources, France, Switzerland and Germany have re-exported a total of 9 t of caviar from aquaculture sources from 1998-2006.

Fig. 8: Re-exports by reported re-exports (t), 1998-2006



CH = Switzerland, DE = Germany, RU = Russian Federation, FR = France, US = USA, AE = United Arab Emirates, PL = Poland, DK = Denmark, TR = Turkey, BE = Belgium, GB = United Kingdom, LU = Luxembourg, SG = Singapore, HK = Hong Kong, CZ = Czech Republic, JP = Japan, FI = Finland, ES = Spain, SK = Slovakia, HU = Hungary.

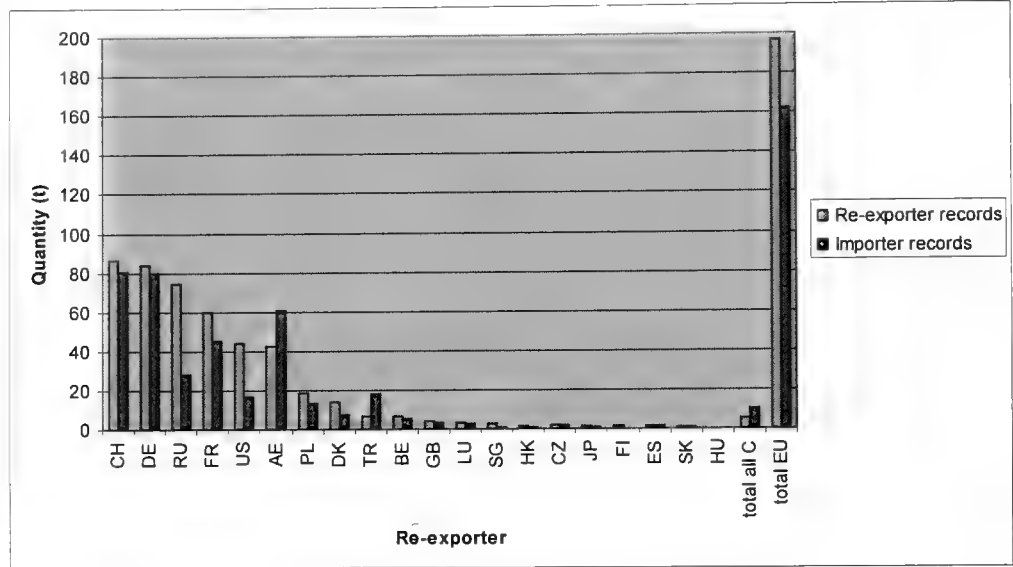
C= caviar derived from aquaculture, W = wild caught

Note: Country omissions indicate zero quantity.

Source: Data derived from the CITES Trade Database.

When importer and (re-)exporter records are compared for caviar re-exports, additional discrepancies in reported quantities in trade are indicated (Fig. 9). In general, higher quantities of re-exports are reported in re-exporter records compared to importer records, which is the opposite of what is shown in the comparison of direct exports (see Fig. 7). This is especially notable for the Russian Federation, where re-exporter data show that 74 t of caviar was reported re-exported, but importer data shows that only 28 t was reported imported. Since in theory import and re-export records should match, as each specimen should be recorded at the point of re-export and at the point of import, this indicates that misreporting is occurring at some point in the trade chain leading to discrepancy between reported imports and reported re-exports.

Fig. 9: Re-export quantities of wild caviar, reported re-exports vs. reported imports (t), 1998-2006



CH = Switzerland, DE = Germany, RU = Russian Federation, FR = France, US = USA, AE = United Arab Emirates, PL = Poland, DK = Denmark, TR = Turkey, BE = Belgium, GB = United Kingdom, LU = Luxembourg, SG = Singapore, HK = Hong Kong, CZ = Czech Republic, JP = Japan, FI = Finland, ES = Spain, SK = Slovakia, HU = Hungary.

C = caviar from aquaculture.

Note: Country omissions indicate zero quantity.

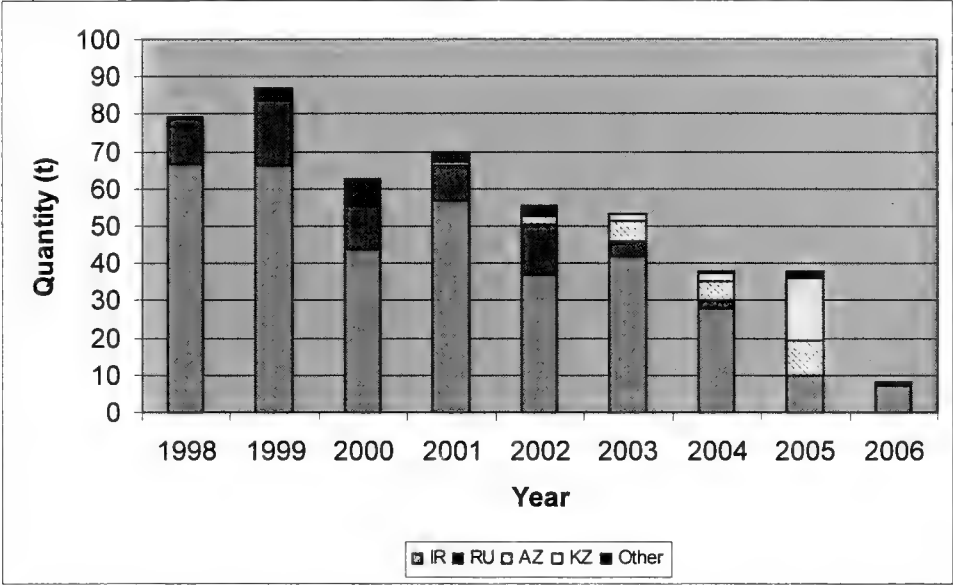
Source: Data derived from the CITES Trade Database.

Other points to note from CITES export data include that over 7 t of caviar has been reported as re-exported to Brazil from 1998-2006, mainly from EU Member States and the USA, however no imports have been reported.

Trade routes into the EU

Reported EU imports have declined since 1999, mirroring declines in the global caviar trade. Apart from in 2005 when there were significant imports from Kazakhstan, Iran was by far the major exporting country for reported imports of wild caviar into the EU, followed by the Russian Federation, (Fig. 10).

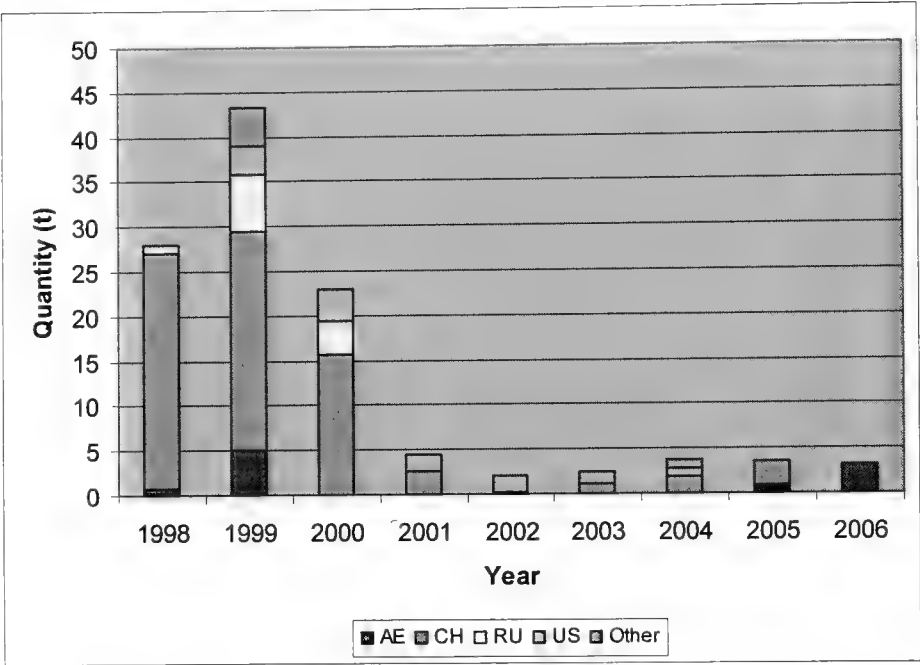
Fig. 10: Reported imports of wild caviar into the EU by exporting country (t)



IR = Iran, RU = Russian Federation, AZ = Azerbaijan, KZ = Kazakhstan, Other = Bulgaria, China, Romania.
Note: Country omissions indicate zero quantity.
Source: Data derived from the CITES Trade Database.

Up until 2001, Switzerland was the main re-exporter of wild caviar into the EU; at its highest the volume re-exported was 26 t (Fig. 11). After 2001, reported re-exports from Switzerland sharply declined and persisted in relatively small quantities (under 3 t) (Fig. 11).

Fig. 11: Reported re-exports to EU by re-exporting country, based on re-exporter data (t)



AE = United Arab Emirates, CH = Switzerland, RU = Russian Federation, US = USA, Other = Czech Republic, France, Turkey.

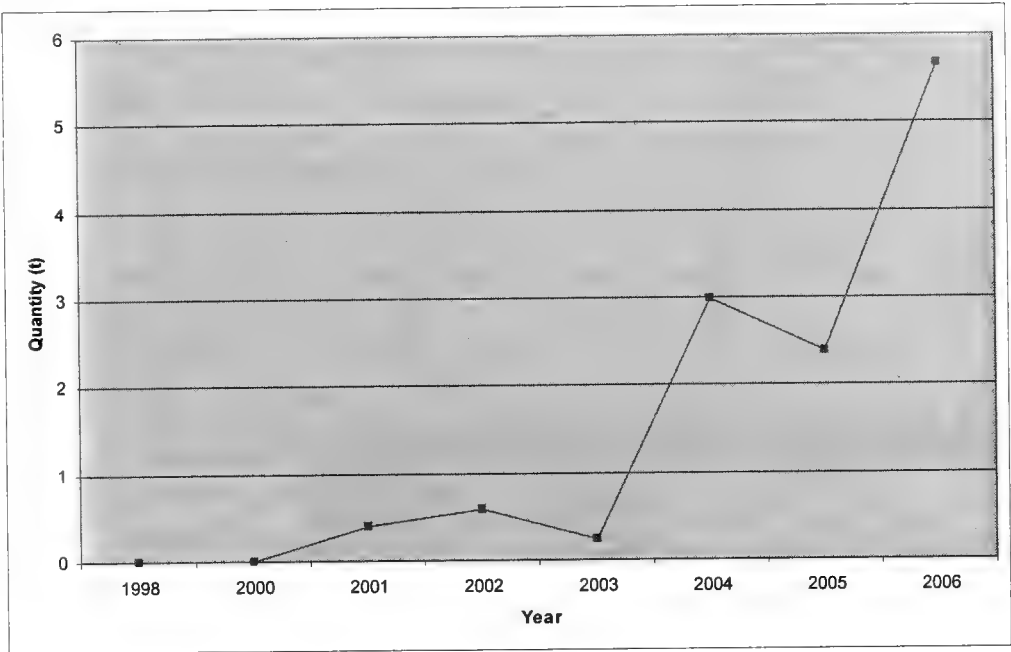
Note: Country omissions indicate zero quantity.

Source: Data derived from the CITES Trade Database.

The EU has reported 12 t of reported direct exports of caviar from aquaculture from 1998-2006, following a roughly increasing trend (Fig. 12).

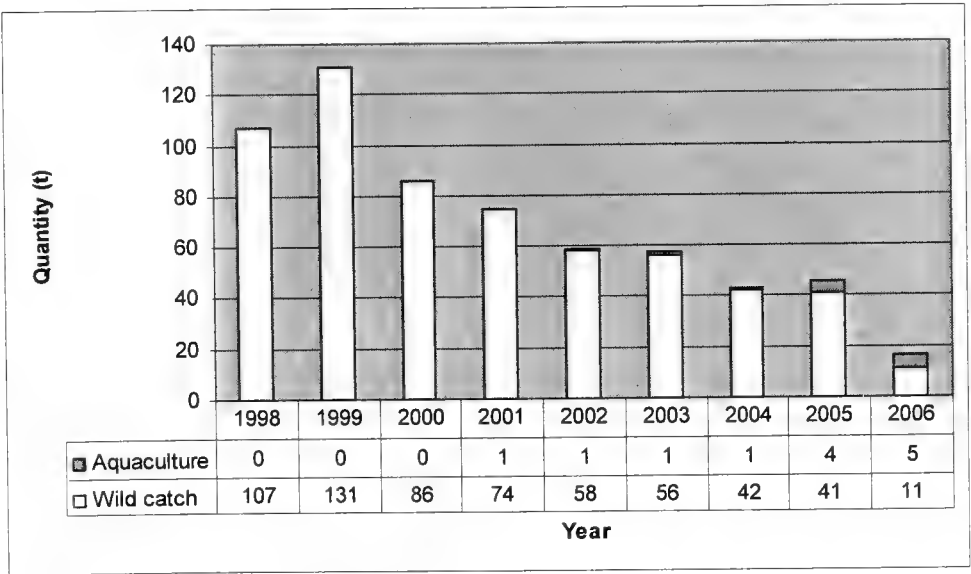
EU reported imports of caviar from aquaculture operations have followed the same trend as global reported imports from aquaculture, increasing since 1998 (Fig. 13). Although reported imports of caviar from aquaculture into the EU are still occurring in relatively small quantities, 5 t at maximum, it is notable that caviar from aquaculture operations represented approximately 31% of all reported caviar imports in 2006.

Fig. 12: Reported direct exports of caviar from aquaculture from the EU (t), 1998-2006



Source: Data derived from the CITES Trade Database.

Fig. 13: EU reported imports by source (t), 1998-2006



Source: Data derived from the CITES Trade Database.

Trade data analysis indicates that non-CITES Parties within the EU area are involved in trade. For example, EU Member States report re-exports of caviar to Andorra. However, the role of such countries needs to be investigated as a lower priority for further research. The same is true for some dependant territories such as the Netherlands Antilles, where there are no reported imports, yet re-exports of caviar have been reported. However, it should be noted that many small island countries seem to have poor CITES reporting, possibly due to a lack of capacity.

Exports and quotas

Table 4 shows the CITES export quotas that have been allocated for range State caviar exports from 2006-2008. Quotas for wild caviar were not published in 2006, except for *Acipenser persicus* for Iran, meaning that no trade was permitted for species other than *A. persicus*. For 2006, no export quotas were published by the CITES Secretariat to permit international trade in Amur River sturgeon species *A. schrenckii* and *Huso dauricus*. Commercial fishing of these species is banned in the Russian Federation and no commercial catch quotas are established, meaning that commercial trade in caviar from these species is illegal⁶. However, in 2008, CITES export quotas were published for these species.

Table 4: CITES wild caviar quotas for 2006-2008 (kg)

| Exporter | Taxon | 2006 | 2007 | 2008 |
|----------|----------------------------------|--------|--------|--------|
| AZ | <i>Acipenser gueldenstaedtii</i> | NP | 3360 | 3360 |
| | <i>Acipenser stellatus</i> | NP | 3000 | 3000 |
| | <i>Huso huso</i> | NP | 300 | 300 |
| CN | <i>Acipenser schrenckii</i> | NP | 1337 | 1337 |
| | <i>Huso dauricus</i> | NP | 1672 | 1595 |
| IR | <i>Acipenser gueldenstaedtii</i> | NP | 1000 | 1000 |
| | <i>Acipenser nudiiventris</i> | NP | 0 | 0 |
| | <i>Acipenser persicus</i> | 44 370 | 38 000 | 37 000 |
| | <i>Acipenser spp.</i> | | 1000 | |
| | <i>Acipenser stellatus</i> | NP | 3200 | 3200 |
| | <i>Huso huso</i> | NP | 1000 | 1000 |
| KZ | <i>Acipenser gueldenstaedtii</i> | NP | 3270 | 3070 |
| | <i>Acipenser nudiiventris</i> | NP | 0 | 0 |
| | <i>Acipenser stellatus</i> | NP | 10 637 | 8500 |
| | <i>Huso huso</i> | NP | 1761 | 1700 |
| RU | <i>Acipenser gueldenstaedtii</i> | NP | 20 000 | 20 000 |
| | <i>Acipenser schrenckii</i> | NP | 1900 | 350 |
| | <i>Acipenser spp.</i> | | | |
| | <i>Acipenser stellatus</i> | NP | 3500 | 3500 |
| | <i>Huso dauricus</i> | NP | 2560 | 1280 |
| | <i>Huso huso</i> | NP | 700 | 700 |

NP = Not published.

Source: Adapted from the CITES website.

Caviar data from the UNEP-WCMC CITES Trade Database indicates that from 2001-2005⁷, the Russian Federation has not submitted export data to the Secretariat, for any sturgeon species (Annex 1). Additionally, in 2005, Kazakhstan did not submit export data for any sturgeon species. In 2006, Iran also did not submit export data.

⁶ Vaisman, A. and Fomenko, P. (2006). *Siberia's black gold: Harvest and trade in Amur River sturgeons in the Russian Federation*. TRAFFIC Europe. Brussels, Belgium.

⁷ For 2006, export quotas were established only for IR.

When export data from range States are compared against CITES caviar export quotas, it appears that in some years range States have exceeded their quotas (Annex 1) (UNEP-WCMC, 2008). Generally, for most range States except for Azerbaijan, incidences of exceeding quotas have decreased after 2003 (Annex 1) (UNEP-WCMC, 2008). The most significant incidences of a range State exceeding its quota occurred in 2006, when Kazakhstan exported 203 kg of *A. stellatus* and 199 kg of *Huso huso*, when no quotas were published that year for those species (Table 4, Annex 1) (UNEP-WCMC, 2008). No international trade is permitted where no quota has been published for a CITES-listed sturgeon species, as in that case there is no established quota against which to regulate trade.

In some cases, such as when Iran exceeded its quota for *A. nudiventris* by 83 kg in 2002, countries do not use the entire export quota in the previous year for a species (in this case, 916 kg used out of a quota of 1000 kg for 2001), so it is possible that exports reported the following year could be a carry-over from the previous year. However, in the cases of Kazakhstan exceeding its quota in 2006, carrying over quantities from the previous year's quota cannot explain the discrepancy as no quota was published in 2005.

By weight, however, the most significant occurrence of exceeding CITES caviar quotas occurred in 2001, when Kazakhstan exceeded the quota for *H. huso* by 2936 kg (Table 5), which is also noted in UNEP-WCMC, 2008. Since no export quotas were published in 2000, it is not possible that this is a case of carrying over remaining quantities under the export quota from the previous year.

Table 5: Mass and percentage by which range State reported exports exceeded CITES caviar quota

| Exporter | Taxon | Year | | | | | | | | | | | |
|----------|----------------------------------|------|----|------|-----|------|----|------|----|------|----|------|-----|
| | | 2001 | | 2002 | | 2003 | | 2004 | | 2005 | | 2006 | |
| | | kg | % | kg | % | kg | % | kg | % | kg | % | kg | % |
| AZ | <i>Acipenser gueldenstaedtii</i> | 0 | 0 | 0 | 0 | 0 | 0 | 1003 | 21 | 1952 | 34 | - | 0 |
| | <i>Acipenser stellatus</i> | 0 | 0 | 0 | 0 | 0 | 0 | 2149 | 44 | 1044 | 28 | - | 0 |
| | <i>Huso huso</i> | 0 | 0 | 0 | 0 | 162 | 29 | 41 | 14 | 123 | 33 | 1* | n/a |
| IR | <i>Acipenser gueldenstaedtii</i> | 0 | 0 | 264 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Acipenser nudiventris</i> | 0 | 0 | 83 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Acipenser stellatus</i> | 1643 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Huso huso</i> | 2132 | 35 | 0 | 0 | 436 | 17 | 0 | 0 | 0 | 0 | 1 | n/a |
| KZ | <i>Acipenser gueldenstaedtii</i> | 638 | 17 | 270 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Acipenser nudiventris</i> | 0 | 0 | 187 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Acipenser stellatus</i> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 203 | n/a |
| | <i>Huso huso</i> | 2936 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 199 | n/a |
| RU | <i>Acipenser schrenckii</i> | 0 | 0 | 463 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 |
| | <i>Huso huso</i> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | n/a |

"-" = no data available

"n/a" = % of quota unavailable since quota not published, or zero quota, meaning that exports should not have occurred in that year.

* = Data indicates that Azerbaijan exported caviar in 2006 when there was no allocated quota, although it should be noted that the 1kg reported in trade was a seizure by the United States.

Note: Year prior to 2001 not included as CITES caviar quotas unavailable.

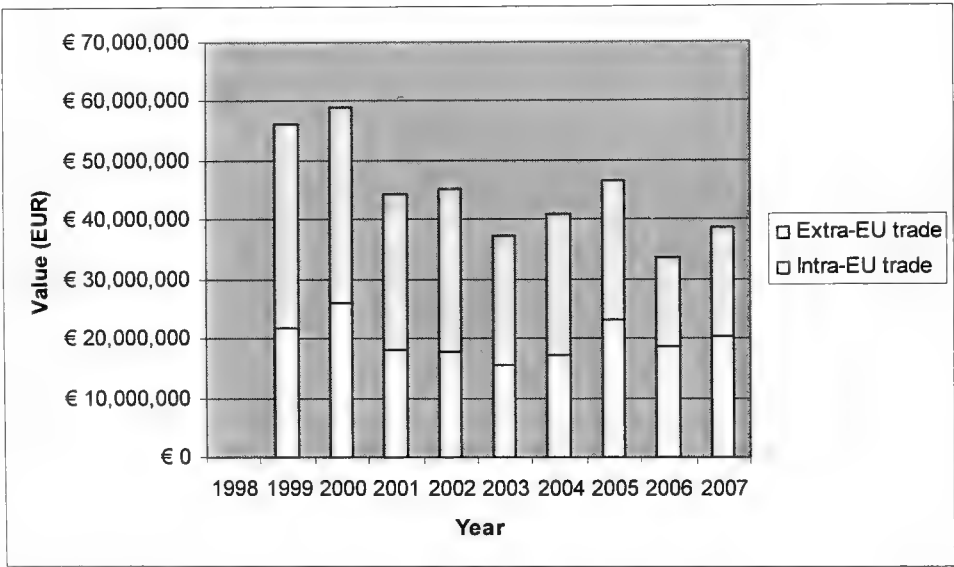
Source: Adapted from the CITES Trade Database and CITES website.

Value of the caviar trade

This section outlines the trends in reported import values for caviar from 1998-2007. The data source for all figures and tables in this section is the external Trade Database from Eurostat, and “EU” refers to the EU-27.

Figure 14 shows the reported value of imports that have been declared by the EU per year from 1998-2007, including a breakdown of values from reported imports originating from outside the EU (extra-EU trade), and reported imports originating from within the EU (intra-EU trade). In general, the reported value from extra-EU trade has been higher than the intra-EU trade. The year with the highest reported import value was 2000, at almost EUR59 million. Reported import values have followed a roughly decreasing trend since then, with intra-EU import values overtaking extra-EU import values since 2005.

Fig. 14: Reported caviar import values into EU by year (EUR)



Source: Adapted from the Eurostat external Trade Database.

Total quantity of reported EU imports of wild-sourced caviar (in tonnes), and reported EU import value in EUR (excluding intra-EU trade) are used to calculate EUR/kg values from 1998-2007 in Table 6. Percentage of global reported imports is also given for each year, which indicates that although a decreasing trend in tonnes of caviar imported into the EU is evident, the EU has consistently imported about half of all global reported imports of caviar by quantity.

Notably, while tonnage of reported caviar imports has decreased, the value of EUR/kg of reported caviar imports has increased greatly over these years, from EUR264 in 1999 to EUR1 359 in 2006 (Table 6).

Table 6: EU reported import quantity and declared EU import value by year, excluding intra-EU trade (EUR), 1998-2007

| Year | EU imports (W, t) | % global imports | EU import value* | EUR/kg |
|------|-------------------|------------------|------------------|--------|
| 1998 | 107 | 53% | n/a | n/a |
| 1999 | 131 | 50% | € 34 501 761 | € 264 |
| 2000 | 86 | 39% | € 32 965 066 | € 385 |
| 2001 | 74 | 42% | € 26 197 683 | € 352 |
| 2002 | 58 | 52% | € 27 510 611 | € 474 |
| 2003 | 56 | 59% | € 21 464 409 | € 384 |
| 2004 | 42 | 47% | € 23 642 604 | € 561 |
| 2005 | 41 | 58% | € 23 299 903 | € 566 |
| 2006 | 11 | 46% | € 15 014 871 | € 1359 |
| 2007 | n/a | n/a | € 18 303 390 | n/a |

Note: EU values do not include Switzerland (CH).
Source: Adapted from the Eurostat external Trade Database and the CITES Trade Database.
*Values do not include intra-EU trade, and include W and C.

Caviar seizures in the EU

The following tables and graphs illustrate reported caviar seizures in the EU from 1998-2006. All tables and figures in this section are derived from caviar data taken from the EU-TWIX database. It should be noted that trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort, in their reporting efficiency to EU-TWIX, and in addition methods of entering seizure data can vary among Member States (e.g. some data are not recorded at the species level).

Table 7 shows that caviar seizures reported in the EU by mass were highest in 2000 with total seizures at 4 325 kg, and in 2003 at 1 373 kg.

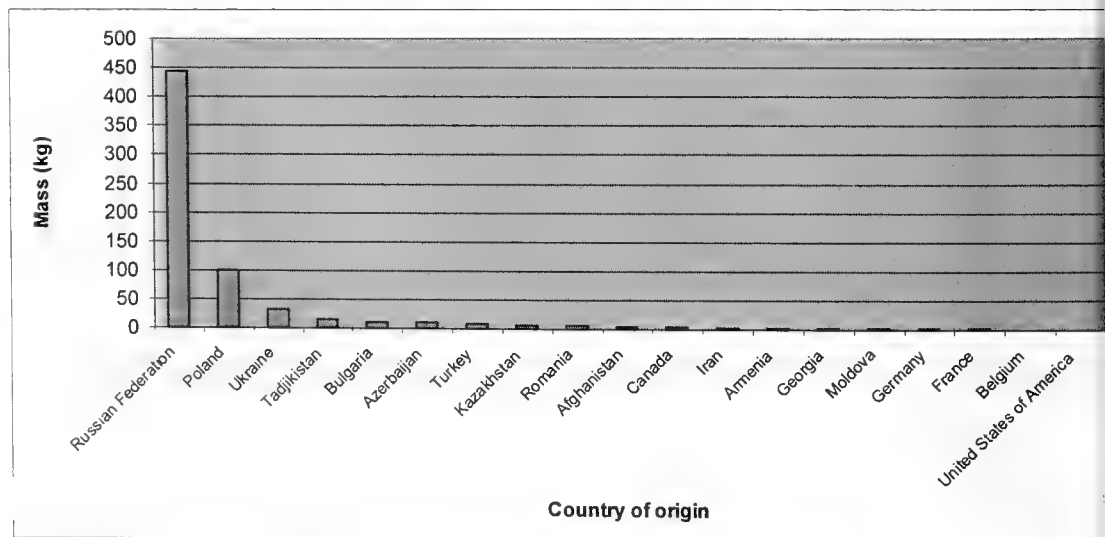
Excluding where the country of origin was declared as "unknown" (which represents the vast majority of seizures by weight at 6 640 kg), the main country of origin for caviar seizures in the EU from 1999-2007 is the Russian Federation at 445 kg (Fig. 15). This is followed by Poland at 100 kg, and the Ukraine at 32 kg (Fig. 15).

Table 7: Total EU caviar seizures by year, 1999-2007

| Year | Total (kg) |
|-------------|------------|
| 1999 | 3 |
| 2000 | 4 325 |
| 2001 | 981 |
| 2002 | 305 |
| 2003 | 1 373 |
| 2004 | 101 |
| 2005 | 236 |
| 2006 | 79 |
| 2007 | 48 |
| Grand Total | 7 450 |

Source: Adapted from the EU-TWIX database.

Fig. 15: Seizures by country of origin, 1999-2007 (excluding "Unknown" = 6 640 kg)

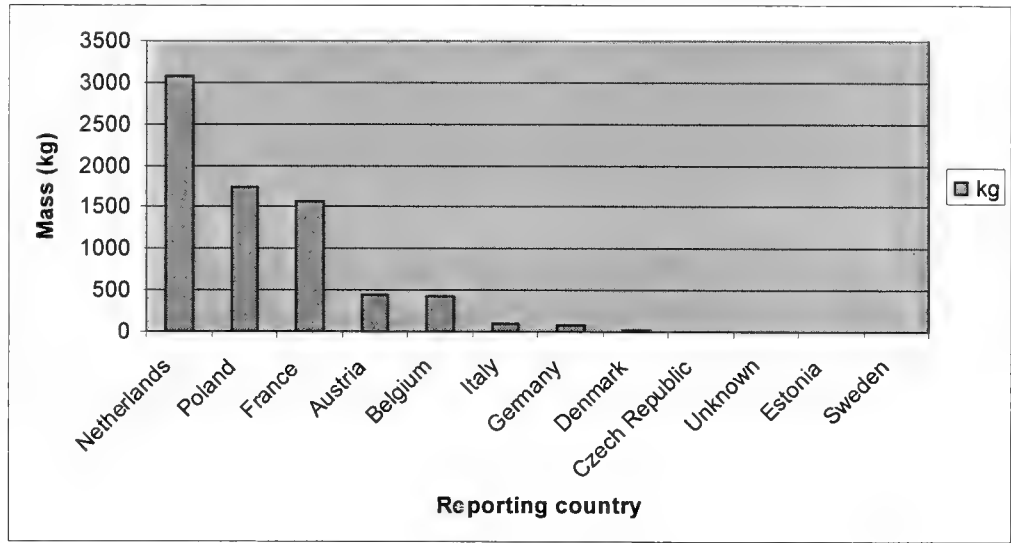


Source: Adapted from the EU-TWIX database.

Briefing on the evolution of the caviar trade and range State implementation of CITES Resolution Conf. 12.7 (Rev. CoP14)

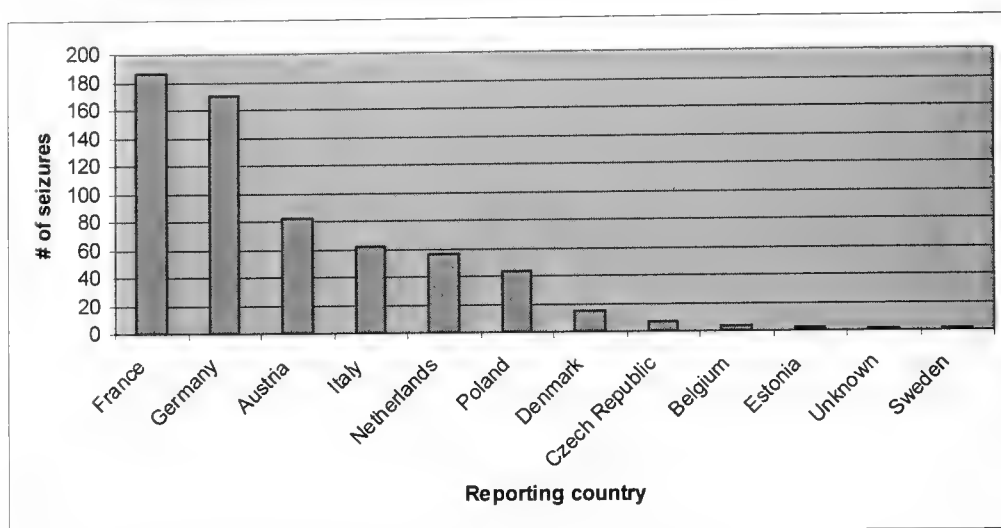
The three EU Member States which have had the highest weight of total seizures from 1999-2007 are the Netherlands (3 073 kg), Poland (1 731 kg), and France (1 573 kg) (Fig. 16). However, the Member States with the highest total number of seizure cases are France (186 cases), Germany (170 cases), and Austria (82 cases) (Fig. 17).

Fig. 16: Total seizures by reporting country (kg), 1999-2007



Note: Reporting country as “Unknown” is a result of an EU-TWIX reporting error.
Source: Adapted from the EU-TWIX database.

Fig. 17: Total number of seizures by reporting country, 1999-2007



Note: Reporting country as "Unknown" is a result of an EU-TWIX reporting error.

Source: Adapted from the EU-TWIX database.

Few records of caviar seizures in the EU contain information about which sturgeon species the caviar was derived from. In fact, Table 8 shows that 7 450 kg (81% of total seizures) of seized caviar did not have information to the species level. Of the 5% of caviar seizures by mass for which these data were available, the most frequently seized caviar products were derived from *H. huso*, followed by *A. stellatus* and *A. persicus*.

Table 8: Total caviar seizures in the EU by species and mass (kg)

| Species | Total (kg) |
|----------------------------------|------------|
| Unknown (-) | 6 041 |
| <i>Acipenser baerii</i> | 2 |
| <i>Acipenser gueldenstaedtii</i> | 144 |
| <i>Acipenser oxyrinchus</i> | 11 |
| <i>Acipenser persicus</i> | 150 |
| <i>Acipenser stellatus</i> | 206 |
| <i>Acipenser sturio</i> * | 208 |
| <i>Acipenser transmontanus</i> | 0 |
| <i>Huso dauricus</i> | 0 |
| <i>Huso huso</i> | 688 |
| Grand Total | 7 450 |

Source: Adapted from the EU-TWIX database.

*Data recorded in EU-TWIX as caviar from *Acipenser sturio* is likely to be the result of a reporting error, as this species that is not known to be harvested for caviar.

RANGE STATE COMPLIANCE WITH RESOLUTION CONF. 12.7 (REV. COP14)

Registration of licensed facilities for caviar export, processing and repackaging

Resolution Conf. 12.7 (Rev. CoP14) recommends that to regulate trade in sturgeon products, as of 2000, range States should license legal exporters of specimens of sturgeon and paddlefish species, maintain a register of these licensed facilities which should be assigned official registration codes, and provide this information to the Secretariat. Table 9 summarizes information on registered caviar exporting, packaging, and reprocessing facilities in range States, as reported to the Secretariat as of 23 May, 2008.

Table 9: Summary of licensed exporters and processing and repackaging plants for caviar, in main range States

| Range State | Exporters | | Processing/repackaging | | Total |
|--------------------|----------------------|---------------------------------------|------------------------|---------------------------------------|-------|
| | Number of facilities | Number of registration codes assigned | Number of facilities | Number of registration codes assigned | |
| Azerbaijan | 4 | 4 | 0 | 0 | 4 |
| China | 15 | 15 | 5 | 5 | 20 |
| Kazakhstan | 1 | 0 | 0 | 0 | 1 |
| Iran* | 1 | 0 | 1 | 0 | 1 |
| Russian Federation | 0 | 0 | 9 | 9 | 9 |

*This facility is a caviar exporter/processor/repackager.

Source: CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species, at http://www.cites.org/common/resources/reg_caviar.pdf, consulted on 23 May, 2008.

Some problems are apparent from the CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species:

- CITES Parties have reported 64 t of direct imports of wild caviar from the Russian Federation from 2000-2006, but the Russian Federation has not registered any export facilities from which to export this caviar, although this is a requirement under *Resolution Conf. 12.7 (Rev. CoP14)*. Despite this, the Russian Federation has applied and been granted a CITES export quota for caviar in past years, and also for 2008. However, this issue requires further investigation as it is possible that it could be a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities.
- Iran's registered caviar exporting, processing and re-packaging facility has been registered only since 2008, but Iran has applied and been granted significant export quotas for caviar in previous years, and
- Although Iran and Kazakhstan have only one registered facility each, they have not submitted the official registration codes for these facilities.
- Other than the main range States considered above, CITES data indicates that the US and Uruguay are also direct exporters of caviar to the EU (from aquaculture). While Uruguay has registered and assigned registration codes for an exporting, processing and repackaging facility, the US has not registered any facilities.

Range State reporting to Secretariat on the issuance of CITES permits

Since 2000, under *Resolution Conf. 12.7 (Rev. CoP14)* range States are required to submit copies of all export permits and re-export certificates to the CITES Secretariat within one month of issuance. As of 2007, these permits are included in the UNEP-WCMC Caviar Database.

While general levels of compliance to this requirement are good, compliance by Iran and Kazakhstan is poor and copies of export permits and re-export certificates have not been submitted⁸ (UNEP-WCMC, 2008). China and Azerbaijan have been sending in permits and certificates to UNEP-WCMC on a fairly regular basis, and the Russian Federation has not exported or re-exported caviar for commercial trade since 2006 due to export quota limitations⁹ (UNEP-WCMC, 2008).

Caviar labelling

Under *Resolution Conf. 12.7 (Rev. CoP14)*, range States are required to implement a universal labelling system that involves the application of a non-reusable label on each primary container (i.e. tin, jar, or other receptacle that is in direct contact with the caviar) and applies to all caviar, whether wild or aquaculture origin, produced for commercial and non-commercial purposes, for either domestic or international trade. Minimum requirements for the label are that it should include a standard species code, the source code of the specimen, the ISO two-letter code of the country of origin, the year of harvest (or re-packaging), the official registration code of the processing (or re-packaging) plant, and the lot identification number (or CITES export permit or re-export certificate number in the case of (re-)exports).

The label or mark used by range States should be such that it cannot be removed from the container undamaged, or be transferred to another container. If the non-reusable label does not seal the primary container, caviar should be packaged in a manner that permits visual evidence of any opening of the container. Parties should accept shipments of caviar only if they are accompanied by labels which meet these requirements.

The implementation by range States of the caviar labelling provisions of *Resolution Conf. 12.7 (Rev. CoP14)* is outlined in Table 10.

⁸ The source of the information in this section is J. Caldwell, UNEP-WCMC, *in litt.*, 11 June 2008.

⁹ CITES data show that in 2006 the Russian Federation exported 3 kg of wild-caught caviar from *Huso huso*, but this was as “personal effects” and therefore not subject to regulation as commercial caviar trade.

Table 10: Information on caviar labelling in main sturgeon range States

| Year | Country | Label information | Examples given to Secretariat | CITES Notification number |
|------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|
| 2002 | AZ | New company authorized to process & export caviar, given processing plant code 0003. Labels are used by this company. | Y | 2002/068 |
| 2003 | AZ | Notification about two companies authorized to process and export caviar, given processing plant codes 0002 & 0004. | Y | 2003/005 |
| 2003 | AZ | New company authorized to process & export caviar, given processing plant code 0005. Labels are used by this company. | Y | 2003/056 |
| 2001 | CN | Printed on adhesive paper, non-reusable. Label is fixed to lateral sides of container and extends to upper and lower surfaces. Any attempt to remove the label or open the container will damage the label. Unique two-letter codes used corresponding to the processing and exporting companies. Shaded printing is used to deter counterfeiting. Different colours of labels are used: green for <i>A. schrenckii</i> and yellow for <i>H. dauricus</i> . | Y | 2001/087 |
| 2002 | IR | Labels coloured blue, red & yellow to indicate Beluga (<i>H. huso</i>), Asetra (<i>A. stellatus</i> & pressed caviar) & Sevruga (<i>A. gueldenstaedtii</i> , <i>A. nudiiventris</i> & <i>A. persicus</i>) respectively. Made from synthetic, non-reusable material. Attempts to remove the label will damage it. Tins are additionally enclosed in plastic netting, sealed by metal seal matching the label colour which splits if tampered with. | Y | 2002/019 |
| 2004 | KZ | Labels designed. Printed on adhesive paper, non-reusable. Attempt to open the container will damage the label. Labels bear company name and logo on the left. | Y | 2004/003 |
| 2001 | RU | Printed on adhesive paper, non-reusable. Attempt to open the container will damage the label. One company authorized to prepare labels by instruction of the MA. Label also bears holographic design to deter counterfeiting. Will begin to use labels for the export of primary and secondary containers containing more than 250g of caviar starting with caviar harvested in 2001. <i>Note: This notification replaced by Notification 2003/066.</i> | Y | 2001/088 |
| 2003 | RU | Labels are printed on adhesive paper, non-reusable. Attempts to remove label or open container will result in damage to the label. MA attributes lot identification number to each application, once approved. Label also bears holographic design to deter counterfeiting. Labels for caviar from W sturgeon are coloured as follows: Blue for <i>H. huso</i> and <i>H. dauricus</i> ; red for <i>A. stellatus</i> ; yellow for <i>A. baerii</i> , <i>A. gueldenstaedtii</i> , <i>A. schrenckii</i> , and <i>A. persicus</i> ; green for <i>A. ruthenus</i> and <i>H. huso</i> × <i>A. ruthenus</i> . Caviar from aquaculture has green labels. Replaces notification 2001/088. | Y | 2003/066 |

Source: Derived from CITES Notifications to the Parties.

Note: Only the sturgeon range States of Iran (IR), the Russian Federation (RU), Kazakhstan (KZ), Azerbaijan (AZ) and China (CN) were considered in this table as the main global exporters of caviar based on export quantities.

Briefing on the evolution of the caviar trade and range State implementation of CITES Resolution Conf. 12.7 (Rev. CoP14)

Based on information submitted to the Secretariat, the main sturgeon range States, Iran, the Russian Federation, Kazakhstan, Azerbaijan and China, appear to have all taken administrative measures with regard to caviar labelling, and have designed non-reusable labels for caviar containers. Some range States report having taken extra security measures, to deter counterfeiting of the labels, such as the Russian Federation including a hologram on the label, and China which uses shaded printing.

Labelling methods and security features vary. For example, no security measures are specified for Azerbaijan in the CITES Notifications to the Parties (note that security features are not explicitly required under *Resolution Conf. 12.7 (Rev. CoP14)*). Also, registration codes are not in use for labels from Kazakhstan, since facilities have not been registered (see also Table 9). Additionally, the Russian Federation, Iran, and Kazakhstan are the only main range States which have different sizes of labels or labelling methods for use on different sizes of containers (e.g. containers larger or smaller than 250g, or tins). The Russian Federation and Iran also have colour-coded labels depending on which species of sturgeon the caviar is derived from. However, it is unclear whether the Iranian labels applied to smaller containers (where netting is not used) are applied in such a way as to become damaged only when attempts are made to remove the label, or whether the label will also become damaged if attempts are made to open the container. Kazakhstan and Azerbaijan did not implement the caviar labelling provision until 2003 and 2004.

Within the scope of this briefing paper, it was not possible to assess the extent to which the labelling systems described in Table 10 are being implemented in these caviar range States.

SUMMARY AND CONCLUSIONS

General trends

Sturgeon quantities

The reported catch of sturgeon in main range States has decreased since 1998, whereas the quantity of **aquaculture production of sturgeon in European inland waters has increased greatly**. Generally, these trends in sturgeon production (wild catch and aquaculture) are consistent with the trends in quantities of caviar in trade.

Caviar quantities

Global legal reported imports of caviar have significantly decreased in quantity from 1998 to 2006. The 27 EU Member States as a group represent the largest global importer of legal caviar, in total tonnes (t) of wild caviar imported from 1998-2006. Over 97% of reported global caviar imports were sourced from the wild. After the EU, the US, Switzerland, and Japan are the next largest importers of wild caviar. Although a decreasing trend in quantity of caviar imported into the EU is evident, the **EU has consistently imported about half of all reported global imports of caviar by quantity**. Within the EU, Member States that have imported the largest mass of caviar from 1998-2006 are Germany and France, together making up about 75% of all reported EU imports, followed by Spain, and Belgium. Up until 2001, Switzerland was the main re-exporter of wild caviar into the EU.

At the global level, the general increasing trend in the import of caviar from aquaculture operations ("C") has continued since 2002. Reported EU imports of caviar from aquaculture operations have also followed this trend, increasing since 1998. Although reported imports of caviar from aquaculture into the EU have occurred in relatively small quantities, it is notable that **caviar from aquaculture operations represented approximately 31% of all reported caviar imports into the EU in 2006**. Caviar aquaculture production within the EU may also affect these trends, however if such caviar is not exported outside the EU it does not appear in CITES data.

Iran is by far the largest global exporter of wild caviar at 438 t from 1998-2006. The Russian Federation (138 t), Kazakhstan (95 t) and Azerbaijan (35 t) are the next three largest exporters by quantity. The main direct exporters globally of caviar derived from aquaculture operations are France (23 t), Italy (17 t), and the USA (9 t). Switzerland, Germany, the Russian Federation, France and the USA are the top re-exporters of wild caviar from 1998-2006.

Some discrepancies appear when import records are compared with (re-)export records. These discrepancies could be a result of misreporting such as importing countries not reporting imports correctly, or could indicate caviar laundering may be occurring in the trade chain, e.g. illegal caviar could be added to the shipments after re-export, leading to an increased mass of the shipment at point of import. Alternatively, the discrepancies could be a result of the fact that Parties report on permits issued, rather than actual trade. Further research is required in order to determine the cause of these discrepancies, if possible. For Iran and the Russian Federation, importers have reported more wild caviar in trade imported from these countries than Iran and the Russian Federation have reported as direct exports. For caviar from aquaculture, the greatest difference between quantities reported in exporter records vs. importer records occurs where France is the re-exporter. Higher quantities of re-exports are reported in re-exporter records compared to importer records, which is the opposite of what is shown in the comparison of direct exports. This is especially notable for the Russian Federation, where re-exporter data shows that 74 t of caviar was re-exported, but importer data shows that only 28 t was imported.

Value of the caviar trade

In general, the reported import value from extra-EU trade has been higher than the intra-EU trade. The year with the highest reported import value was 2000, at almost EUR59 million. Reported import values have followed a roughly decreasing trend since then, with reported intra-EU import values overtaking extra-EU import values since 2005. **While tonnage of reported caviar imports has decreased, the value of EUR/kg of reported caviar imports has increased greatly over these years, from EUR264 in 1999 to EUR1 359 in 2006**, which could be a reflection of the increased scarcity of the product since reported global and EU imports have also declined.

CITES quotas for caviar

When export data from range States is compared against CITES caviar quotas, it appears likely that **in some years range States have exceeded their quotas** (UNEP-WCMC, 2008). Generally, for most range States except for Azerbaijan, **incidences of exceeding quotas have decreased after 2003** (UNEP-WCMC, 2008). This could be a result of the amendment of *Resolution Conf. 12.7* in 2002 to require CITES Parties to not accept the import of specimens of *Acipenseriformes* species from stocks shared between different range States unless export quotas for that year have been established by the range States concerned and have been communicated by the Secretariat to the Parties.

Caviar data from the UNEP-WCMC CITES Trade Database indicates that **from 2001-2005, the Russian Federation has not submitted export data to the Secretariat, for any sturgeon species**. Additionally, in 2005, Kazakhstan did not submit export data for any sturgeon species. In 2006, Iran also did not submit export data. If a CITES Party does not submit their Annual Report for three consecutive years, the Secretariat can recommend that other Parties do not trade with the non-reporting Party. However, although the Russian Federation, Kazakhstan and Azerbaijan have submitted Annual Reports, they may not have included sturgeon trade data. This could be partly due to the administrative structure in some countries and the consequent reporting obligations of different administrative bodies (e.g. the CITES Management Authority may be split between different Ministries).

Under *Resolution Conf. 12.7 (Rev. CoP14)* *Conf. 12.7 (Rev. CoP14)*, range States are required to provide to the CITES Secretariat or UNEP-WCMC copies of all export permits and re-export certificates within one month of having issued them, for inclusion in the UNEP-WCMC Caviar Database, however of the main sturgeon range States considered, **Iran and Kazakhstan have not been complying with this requirement** (UNEP-WCMC, 2008).

Exports of caviar by sturgeon species

It is notable that the Russian Federation did not submit export data for any sturgeon species after 2001. The Russian Federation had the highest total quantity of reported exports of caviar from *A. gueldenstaedtii*. Kazakhstan had the highest total reported export quantity of caviar from *A. nudiventris*, although exports from this species were only reported over a 3-year period from 2000-2002. For *A. persicus*, Iran was the only range State with reported direct exports of this species, and has exported a total of 202 402 kg from 1998-2005. China had the highest total reported direct exports of *A. schrenckii*. Iran had the highest reported exports of *Acipenser* spp. and is the only range State to have traded this product in any significant quantities. Iran also had the highest total reported export quantity of *A. stellatus*, followed by the Russian Federation and then Kazakhstan. China had the highest reported total quantity of caviar exports from *H. dauricus* based on exporter records only, however when importer records are considered, the Russian Federation appears to have exported a higher quantity than China. Finally, for *H. huso*, Kazakhstan had the highest reported exports of caviar from this species, followed closely by Iran. Further information on the trade in caviar by species is provided in UNEP-WCMC, 2008.

Caviar seizures in the EU

Quantities of caviar reported to have been seized in the EU were highest in 2000, with total reported seizures at 5 359 kg, and since then reported seizures have generally decreased in quantity, other than an increase in quantities seized in 2003 to 2 054 kg, from 542 kg in 2002. Trends in seizures derived from EU-TWIX data are only indicative of patterns of illegal trade, because Member States differ in their enforcement effort and in their reporting efficiency to EU-TWIX.

The three EU Member States which have had the highest quantities seized caviar from 1999-2007 are France (3 302 kg), the Netherlands (3 074 kg), and Poland (1 731 kg). However, the Member States with the highest total number of seizure cases are France (349 cases), Germany (170 cases), and Austria (153 cases).

Registration of caviar processing and (re)packaging facilities

According to the CITES register of licensed exporters and of processing and repackaging plants for specimens of sturgeon and paddlefish species, consulted on 23 May 2008, some discrepancies in declared trade and types of facilities registered are evident. For example, the **Russian Federation has declared 138 t of direct exports from 1998-2006, but has not registered any export facilities**, despite this being a requirement under *Resolution Conf. 12.7 (Rev. CoP14)*. Despite having no registered exporters, the Russian Federation has applied for and been granted a CITES export quota for caviar in past years and also for 2008. However, this issue requires further investigation as it is possible that it could be a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities. If it is the case that the Russian Federation has not implemented the requirement to register and assign official registration codes and submit these to the CITES Secretariat for inclusion in the register, Parties should not be accepting Russian caviar exports. This recommendation is also true for caviar range States that have not been considered in detail in this briefing, where caviar exporting, processing and (re-)packaging facilities are not registered and codes have not been assigned, such as is the case for the US. **Kazakhstan and Iran have also not reported official registration codes of their registered facilities in the CITES register and it would be useful to know whether these Parties have issued registration codes and not reported them, or whether they have not issued such codes, as required under Resolution Conf. 12.7 (Rev. CoP14).**

Table II: Summary of issues with Range State implementation of requirements and year requirement was applied under *Resolution Conf. 12.7 (Rev. CoP14)*

| Range State | Quotas exceeded or exports when no quotas established (2003)* | Export data not reported (1998)* | Permits submitted to UNEP-WCMC permit database** (2007) | Exporting facilities | | Processing & repackaging facilities | |
|--------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------------------------|----------------------|------------------------------------|-------------------------------------|------------------------------------|
| | | | | Registered (2000) | Registration codes assigned (2000) | Registered (2000) | Registration codes assigned (2000) |
| Year requirement applied | 2003 | 1998 | 2007 | 2000 | 2000 | 2000 | 2000 |
| AZ | 2003 | | | | | | |
| | 2004 | | | | | | |
| | 2005 | | | | | | |
| | 2006 | - | Fair | Yes | Yes | No | No |
| CN | - | - | Fair | Yes | Yes | Yes | Yes |
| IR | 2001 | | | | | | |
| | 2002 | | | | | | |
| | 2003 | | | | | | |
| | 2006 | 2006 | Poor | Yes | No | Yes | No |
| KZ | 2001 | 2005 | | | | | |
| | 2002 | | Poor | Yes | No | No | No |
| RU | | 2001 | | | | | |
| | | 2002 | | | | | |
| | | 2003 | | | | | |
| | | 2004 | | | | | |
| | 2002 | 2005 | No quota for exports | | | | |
| | 2006 | | | No | No | Yes | Yes |

* Source: Data adapted from the UNEP-WCMC Trade Database.

** See UNEP-WCMC, 2008 for more detailed information on permits.

Recommendations

The following recommendations would be useful in effectively regulating the caviar trade in the EU:

- Member States should be particularly vigilant when issuing import permits for caviar in particular by ensuring that export quotas are not being exceeded, that the caviar containers are labelled in accordance with *Resolution Conf. 12.7 (Rev. CoP14)* and by checking the caviar trade database to ensure that export permits and re-export certificates are not being used fraudulently.
- Azerbaijan, Iran, Kazakhstan, Russia and the US should be engaged through CITES processes to encourage registration of all caviar exporting and processing/repackaging facilities, and issuance and reporting of official registration codes for these facilities to the CITES register. In the case of the Russian Federation, this issue requires further investigation to determine whether it is a technical problem, where Russian processing facilities are also acting as exporters but the Russian Federation has registered such facilities only as processing and (re-)packaging facilities.
- Iran and Kazakhstan should be engaged through CITES processes to encourage the provision of all caviar export permits and re-export certificates within one month of having issued them, for inclusion in the UNEP-WCMC Caviar Database (UNEP-WCMC, 2008).
- Trade data analysis indicates that non-CITES Parties within the EU area are involved in the caviar trade. For example, EU Member States report re-exports of caviar to Andorra. However, the role of such countries should be investigated.
- At the broader level, data on caviar quantities in trade from the CITES Trade Database should be compared with the data available from the FAO Fishstat database, to determine whether this data is consistent, and if not, the reasons for any discrepancies and how this may be related to range State reporting.

ANNEX I: RANGE STATE REPORTED EXPORTS COMPARED TO CITES EXPORT QUOTAS 1998-2006

| Exporter | Taxon | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | 2008 | |
|----------|---------------------------------|--------|-------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|
| | | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota | Export | Quota |
| AZ | <i>Aspenser gueldenstaedtii</i> | | n/a | 2 | n/a | 605 | n/a | 2047 | 3450 | 1846 | 2770 | 3695 | 4200 | 4783 | 3780 | 532 | 3780 | | NP | | 3360 | 3360 | |
| | <i>Aspenser stellatus</i> | | n/a | | n/a | 305 | n/a | 817 | 2840 | 1278 | 2470 | 3510 | 4500 | 4819 | 2700 | 314 | 2700 | | NP | | 3000 | 3000 | |
| | <i>Huso huso</i> | | n/a | 3 | n/a | 146 | n/a | 147 | 520 | 332 | 530 | 562 | 400 | 291 | 250 | 33 | 250 | 1 | NP | 1 | 300 | 300 | |
| | AZ Total | | n/a | 5 | n/a | 1056 | n/a | 3011 | 6810 | 3456 | 5770 | 7767 | 9100 | 9924 | 6730 | 9849 | 6730 | 1 | 0 | 6660 | 6660 | | |
| CN | <i>Aspenser schrenckii</i> | 1452 | n/a | 3297 | n/a | 25 | n/a | 2620 | 2510 | 1756 | 2510 | 1126 | 2510 | 914 | n/a | 726 | | NP | NP | 1337 | 1337 | | |
| | <i>Huso dauricus</i> | 3380 | n/a | 3547 | n/a | 25 | n/a | 4110 | 3430 | 2433 | 3430 | 1179 | 3430 | 1219 | n/a | 845 | NP | NP | NP | 1672 | 1595 | | |
| | CN Total | 4832 | n/a | 6844 | 0 | 50 | n/a | 6730 | 5940 | 4189 | 5940 | 2305 | 5940 | 2133 | 0 | 1571 | 0 | 0 | 0 | 3009 | 0 | | |
| IR | <i>Aspenser gueldenstaedtii</i> | 44 225 | n/a | 9053 | n/a | 6134 | n/a | 1793 | 3460 | 2364 | 2100 | 1696 | 1950 | 587 | 1755 | 59 | 1600 | | NP | | 1000 | 1000 | |
| | <i>Aspenser undulatus</i> | | n/a | | n/a | | n/a | 916 | 1000 | 83 | 0 | | 0 | | 0 | | | | NP | 0 | 0 | | |
| | <i>Aspenser persicus</i> | 2270 | n/a | 44 380 | n/a | 30 886 | n/a | 40 001 | 51 000 | 34 545 | 55 890 | 39 019 | 63 000 | 10 637 | 56 700 | 665 | 51000 | 8661 | 44370 | 38 000 | 37 000 | | |
| IR | <i>Aspenser spp.</i> | | n/a | | n/a | | n/a | 860 | | 915 | 1000 | 705 | 1000 | 400 | 650 | | 650 | | | | 1000 | | |
| | <i>Aspenser stellatus</i> | 34 616 | n/a | 41 599 | n/a | 23 802 | n/a | 25 143 | 23 400 | 9683 | 14 827 | 7733 | 11 700 | 1954 | 7020 | 87 | 6300 | | NP | | 3200 | 3200 | |
| | <i>Huso huso</i> | 1926 | n/a | 3530 | n/a | 3454 | n/a | 6082 | 3950 | 2641 | 2950 | 2566 | 2130 | 791 | 1065 | 18 | 1065 | 1 | NP | 1000 | 1000 | | |
| | IR Total | 83 037 | n/a | 98 562 | 0 | 64 276 | n/a | 74 695 | 82 810 | 50 231 | 76 767 | 51 720 | 79 780 | 14 368 | 67 190 | 828 | 60 615 | 8662 | 44370 | 44 200 | 42 200 | | |
| KZ | <i>Aspenser gueldenstaedtii</i> | | n/a | | n/a | 3728 | n/a | 3838 | 3200 | 5150 | 4880 | 1758 | 4620 | 1873 | 3204 | 3911 | 3100 | | NP | 3270 | 3070 | | |
| | <i>Aspenser undulatus</i> | | n/a | | n/a | 1691 | n/a | 2417 | 2500 | 596 | 409 | | 0 | | 0 | | 0 | | NP | 0 | 0 | | |
| | <i>Aspenser stellatus</i> | | n/a | | n/a | 10 795 | n/a | 18 708 | 20 900 | 11 176 | 19 770 | 6837 | 26 233 | 7758 | 11 010 | 13 913 | 10490 | 203 | NP | 10 637 | 8500 | | |
| KZ | <i>Huso huso</i> | | n/a | 867 | n/a | 6779 | n/a | 7136 | 4200 | 3473 | 5956 | 1084 | 8531 | 693 | 2360 | 4603 | 2600 | 199 | NP | 1761 | 1700 | | |
| | KZ Total | | n/a | 911 | 0 | 22 993 | n/a | 32 099 | 30 800 | 20 396 | 31 015 | 9680 | 39 385 | 10 324 | 16 574 | 22 426 | 16 190 | 402 | 0 | 15 668 | 13 270 | | |
| | <i>Aspenser gueldenstaedtii</i> | 30 398 | n/a | 25 187 | n/a | 18 341 | n/a | 8152 | 28 300 | 5627 | 28 070 | 3656 | 17 200 | 2413 | 14 580 | | 14 000 | 0 | NP | 20 000 | 20 000 | | |
| RU | <i>Aspenser schrenckii</i> | 1385 | n/a | 2976 | n/a | 1774 | n/a | 837 | 2140 | 813 | 350 | 56 | 350 | 500 | 500 | | NP | NP | 1900 | 350 | | | |
| | <i>Aspenser spp.</i> | | n/a | 9 | n/a | | n/a | 32 | | 29 | | 11 | | 8 | | 2 | | | | | | | |
| | <i>Aspenser stellatus</i> | 17 287 | n/a | 15 103 | n/a | 9419 | n/a | 13 453 | 27 500 | 13 542 | 16 850 | 694 | 13 800 | 3230 | 8280 | 0 | 0 | 0 | NP | 3500 | 3500 | | |
| RU | <i>Huso dauricus</i> | 2758 | n/a | 3633 | n/a | 5452 | n/a | 5155 | 7000 | 1866 | 2300 | 185 | 1000 | 570 | 800 | 648 | NP | NP | NP | 2560 | 1280 | | |
| | <i>Huso huso</i> | 1840 | n/a | 451 | n/a | 2172 | n/a | 894 | 3800 | 910 | 1800 | 673 | 1600 | 273 | 800 | 2 | 600 | 3 | NP | 700 | 700 | | |
| | RU Total | 53 668 | n/a | 47 359 | n/a | 37 158 | n/a | 28 523 | 68 740 | 22 787 | 49 370 | 5275 | 33 950 | 6994 | 23 660 | 652 | 14 600 | 3 | 0 | 28 660 | 24 200 | | |

Source: Data derived from UNEP-WCMC Trade Database. Notes: Quotas include Caspian Sea, Azov Sea, Black Sea, and Amur River. Export quantities include reported direct exports only. Trade in products of "***" has been taken to mean "***" from *A. gueldenstaedtii*, *A. nudipectus*, *A. stellatus*, and *Huso huso*. Blanks indicate that no quota/export quantity published or reported for that year. Figures in italics represent data that was not reported to the Secretariat as exports, and is data taken from import records. n/a = quotas not available for these years. NP = not published.

ANNEX 2: CITES RESOLUTION CONF. 12.7 (REV. COP 14)

RECALLING Resolution Conf. 10.12 (Rev.), adopted by the Conference of the Parties at its 10th meeting (Harare, 1997) and amended at its 11th meeting (Gigiri, 2000), and Resolution Conf. 11.13, adopted by the Conference of the Parties at its 11th meeting;

AWARE that sturgeons and paddlefish of the Order Acipenseriformes represent a valuable renewable biological and economic resource that in recent years has been affected by such negative factors as illegal fishing and illegal trade, regulation of water flow and decrease in natural spawning sites;

RECALLING the concepts endorsed and the progress made toward conservation of Acipenseriformes in the Caspian Sea under the 'Paris Agreement' approved at the 45th meeting of the Standing Committee (Paris, June 2001);

NOTING the need for further research and the importance of scientific monitoring of the status of stocks and an understanding of their genetic structure as the basis for sustainable fisheries management;

CONSIDERING that Eurasian range States of Acipenseriformes species are in need of funds and technical assistance in order to develop regional management and monitoring programmes for conservation, habitat protection, and the combating of illegal fishing and trade;

RECALLING that Article VI, paragraph 7, of the Convention provides that specimens of species listed in the Appendices may be marked to assist in identifying them;

CONSIDERING that the labelling of all caviar in trade would be a fundamental step towards the effective regulation of trade in specimens of sturgeons and paddlefish;

NOTING that, in order to assist the Parties in identifying legal caviar in trade, marking should be standardized and that particular specifications for the design of labels are fundamental, should be generally applied and should also take into account marking systems currently in place and anticipated technological advances in marking systems;

CONSCIOUS that there is a need for improvement of monitoring of caviar re-exports in relation to the original export and the level of exports in relation to annual export quotas;

WELCOMING the establishment of the caviar trade database by the UNEP World Conservation Monitoring Centre (UNEP-WCMC);

RECOGNIZING that Parties take into account domestic markets and illegal trade when issuing export permits, re-export certificates or when setting export quotas;

RECOGNIZING that the setting of export quotas for sturgeon specimens from shared stocks requires transparency;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

URGES the range States of species in the Order Acipenseriformes to:

- a) encourage scientific research and ensure adequate monitoring of the status of stocks¹ to promote the sustainability of sturgeon and paddlefish fisheries through appropriate management programmes;
- b) curtail the illegal fishing of and trade in sturgeon and paddlefish specimens by improving the provisions in and enforcement of existing laws regulating fisheries and export, in close

* Amended at the 13th and 14th meetings of the Conference of the Parties.

¹ The term 'stock' is regarded, for the purposes of this Resolution, to be synonymous with 'population'.

collaboration with the CITES Secretariat, ICPO-Interpol and the World Customs Organization;

- c) explore ways of enhancing the participation of representatives of all agencies responsible for sturgeon and paddlefish fisheries in conservation and sustainable-use programmes for these species;
- d) promote regional agreements between range States of sturgeon and paddlefish species aiming at proper management and sustainable utilization of these species; and
- e) in the case of range States of sturgeons in the Eurasian region, take into account the recommendations in document CoP12 Doc. 42.1 when developing regional conservation strategies and action plans;

RECOMMENDS, with regard to regulating trade in sturgeon products, that:

- a) range States license legal exporters of specimens of sturgeon and paddlefish species and maintain a register of such persons or companies and provide a copy of this register to the Secretariat. The register should be updated when changes occur and communicated to the Secretariat without delay. The Secretariat should distribute this information via a Notification to the Parties and include it in its register on the CITES website;
- b) each importing, exporting and re-exporting Party establish, where consistent with national law, a registration system for caviar processing plants, including aquaculture operations, and repackaging plants in its territory and provide to the Secretariat the list of these facilities and their official registration codes. The list should be updated when changes occur and communicated to the Secretariat without delay. The Secretariat should distribute this information via a Notification to the Parties and include it in its register on the CITES website;
- c) importing countries be particularly vigilant in controlling all aspects of the trade in specimens of sturgeon and paddlefish species, including the unloading of sturgeon specimens, transit, re-packaging, re-labelling and re-exports;
- d) Parties monitor the storage, processing and re-packaging of specimens of sturgeon and paddlefish species in Customs free zones and free ports, and for airline and cruise line catering;
- e) Parties ensure that all their relevant agencies cooperate in establishing the necessary administrative, management, scientific and control mechanisms needed to implement the provisions of the Convention with respect to sturgeon and paddlefish species;
- f) Parties consider the harmonization of their national legislation related to personal exemptions for caviar, to allow for the personal effects exemption under Article VII, paragraph 3, of the Convention and consider limiting this exemption to no more than 125 grams of caviar per person;
- g) all caviar harvested in 2007 from shared stocks subject to agreed export quotas must be exported before the end of 2007. From 2008 onwards, all caviar from shared stocks subject to export quotas should be exported before the end of the quota year (1 March – last day of February) in which it was harvested and processed. For this purpose the export permits for such caviar should be valid until the last day of the quota year at the latest. Parties should not import caviar harvested or processed in the preceding quota year;
- h) no re-export of caviar take place more than 18 months after the date of issuance of the relevant original export permit. For that purpose re-export certificates should not be valid beyond that 18-month period;
- i) Parties supply to UNEP-WCMC directly or to the Secretariat copies of all export permits and re-export certificates issued to authorize trade in caviar, no longer than one month after they have been issued, for inclusion in the UNEP-WCMC caviar trade database;
- j) Parties consult the UNEP-WCMC caviar trade database prior to the issuance of re-export certificates;

- k) the Secretariat shall submit a written progress report at each meeting of the Standing Committee on the operation of the UNEP-WCMC caviar trade database;
- l) where available, Parties use the full eight-digit Customs code for caviar, instead of the less precise six-digit code which also includes roe from other fish species; and
- m) Parties implement the universal labelling system for caviar outlined in Annexes 1 and 2 and importing Parties not accept shipments of caviar unless they comply with these provisions;

RECOMMENDS² further, with regard to catch and export quotas, that:

- a) Parties not accept the import of caviar and meat of Acipenseriformes species from stocks shared between different range States³ unless export quotas have been set in accordance with the following procedure:
 - i) range States have established export quotas for caviar and meat of Acipenseriformes species for that quota year, which from 2008 onwards starts on 1 March and ends on the last day of February of the following year;
 - ii) the export quotas referred to in subparagraph i) have been derived from catch quotas that are based on an appropriate regional conservation strategy and monitoring regime for the species concerned and are not detrimental to the survival of the species in the wild;
 - iii) the catch and export quotas referred to in subparagraphs i) and ii) should be agreed amongst all States that provide habitat for the same stock of an Acipenseriformes species. However, where a stock is shared by more than two States, and if one of these States refuses to participate or does not participate in the shared-stock quota agreement meeting convened in accordance with the agreed decision of all these States, the total and country-specific quotas for the shared stock may be agreed by the remaining range States. This situation must be substantiated in writing by both sides to the Secretariat for information to the Parties. The State not having participated may only export caviar and meat from its allocated quotas after it has notified the Secretariat that it accepts them and the Secretariat has informed the Parties. If more than one range State refuses to participate or does not participate in the process mentioned above, the total and country specific quotas for the shared stock cannot be established. In case of a stock shared by only two range States, the quotas must be agreed by consensus. If consensus cannot be reached, they may call upon a mediator, including the CITES Secretariat, to facilitate the process. They shall have a zero quota until such time as they have reached consensus;
 - iv) range States have provided to the Secretariat by 31 December of the previous year, the export quota referred to in subparagraph i) as well as the scientific data used to establish the catch and export quotas under subparagraphs ii) and iii);
 - v) if the quotas have not been communicated to the Secretariat by the deadline indicated in subparagraph iv) above, the relevant range States have a zero quota until such time as they communicate their quotas in writing to the Secretariat and the Secretariat in turn informs the Parties. The Secretariat should be informed by the range States of any delay and shall in turn inform the Parties; and
 - vi) the Secretariat shall communicate the agreed quotas to the Parties within one month of receipt of the information from the range States;

² At CoP13 it was agreed that this recommendation would not apply to those range States where there is no commercial caviar harvest or export from shared stocks. It was also agreed, however, that the Secretariat or any Party would bring to the attention of the Standing Committee or Conference of the Parties any significant changes in the harvest or export of sturgeon products from such stocks.

³ Quotas do not have to be established for specimens from endemic stocks, i.e. stocks not shared with other countries, and captive-breeding or aquaculture operations. Quotas communicated for such specimens are voluntary quotas.

- b) the Secretariat make all the information mentioned in subparagraph iv) available to Parties upon request; and
- c) if a range State of a shared stock of a species of Acipenseriformes decides to reduce its quotas established in accordance with this Resolution under stricter domestic measures, this shall not affect the quotas of the other range States of this stock;

DIRECTS the Secretariat to provide at each meeting of the Animals Committee a written report, including references to relevant documents, on its activities related to the conservation of and trade in sturgeons and paddlefish;

DIRECTS the Animals Committee, in collaboration with the Secretariat, interested Parties, international organizations and relevant experts, to monitor progress on the relevant provisions of this Resolution and to carry out on a three-year cycle starting in 2008, and using information from preceding years, an evaluation of the assessment and the monitoring methodologies used for stocks of Acipenseriformes species subject to the provisions under RECOMMENDS further, paragraph a), above;

URGES range States to cooperate with the Animals Committee and the Secretariat with a view to implementing the provisions under RECOMMENDS further, paragraph a), and the paragraph DIRECTS the Animals Committee above;

DIRECTS the Animals Committee to provide to the Standing Committee its recommendations on actions to be taken based upon the above-mentioned monitoring of progress and three-year cycle evaluation;

CALLS UPON range States, importing countries and other experts and appropriate organizations, such as the IUCN/SSC Sturgeon Specialist Group, in consultation with the Secretariat and the Animals Committee, to continue to explore the development of a uniform DNA-based identification system for parts and derivatives and aquaculture stocks of Acipenseriformes species to assist in the subsequent identification of the origin of specimens in trade and the development and application of methods for differentiating wild from aquaculture origin caviar in cases where DNA-based methods are not useful;

DIRECTS the Secretariat:

- a) in collaboration with range States and international organizations from both industry and the conservation community, to assist with the development of a strategy including action plans for the conservation of Acipenseriformes; and
- b) to provide assistance with securing financial resources from Parties, international organizations, United Nations specialized agencies, intergovernmental and non-governmental organizations and industry; and

REPEALS the Resolutions listed hereunder:

- a) Resolution Conf. 10.12 (Rev.) (Harare, 1997, as amended at Gigiri, 2000) – Conservation of sturgeons; and
- b) Resolution Conf. 11.13 (Gigiri, 2000) – Universal labelling system for the identification of caviar.

Annex 1 CITES guidelines for a universal labelling system for the trade in and identification of caviar

- a) The uniform labelling system applies to all caviar, from wild and aquaculture origin, produced for commercial and non-commercial purposes, for either domestic or international trade, and is based on the application of a non-reusable label on each primary container.
- b) The following definitions apply in relation to trade in caviar:
- Caviar: processed unfertilized eggs (roe) of Acipenseriformes species.
 - Lot identification number: a number that corresponds to information related to the caviar tracking system used by the processing or repackaging plant.
 - Non-reusable label: any label or mark that cannot be removed undamaged or transferred to another container, which may seal the container. If the non-reusable label does not seal the primary container, caviar should be packaged in a manner that permits visual evidence of any opening of the container.
 - Pressed caviar: caviar composed of unfertilized eggs (roe) of one or more sturgeon or paddlefish species, remaining after the processing and preparation of higher quality caviar.
 - Primary container: tin, jar or other receptacle that is in direct contact with the caviar.
 - Processing plant: facility in the country of origin responsible for the first packaging of caviar into a primary container.
 - Repackaging plant: facility responsible for receiving and repackaging caviar into new primary containers.
 - Secondary container: receptacle into which primary containers are placed.
 - Source code: letter corresponding to the source of the caviar (e.g. W, C, F), as defined in the relevant CITES Resolutions. Note that, among other situations, for caviar produced from a female born in captivity and where at least one parent originated in the wild, the "F" code should be used.
- c) In the country of origin, the non-reusable label should be affixed by the processing plant to any primary container. This label must include, as a minimum: a standard species code as provided in Annex 2; the source code of the caviar; the ISO two-letter code for the country of origin; the year of harvest; the official registration code of the processing plant (e.g. xxxx); and the lot identification number for the caviar (e.g. yyyy), for instance:

HUS/W/RU/2000/xxxx/yyyy

- d) When no repackaging takes place, the non-reusable label referred to in paragraph c) above should be maintained on the primary container and be considered sufficient, including for re-export.
- e) A non-reusable label should be affixed by the repackaging plant to any primary container in which caviar is repackaged. This label must include, as a minimum: a standard species code as provided in Annex 2; the source code of the specimen; the ISO two-letter code of the country of origin; the year of repackaging; the official registration code of the repackaging plant, which incorporates the ISO two-letter code of the country of repackaging if different from the country of origin (e.g. IT-wwwww); and the lot identification number, or CITES export permit or re-export certificate number (e.g. zzzz), for instance:

PER/W/IR/2001/IT-wwwww/zzzz

- f) When caviar is exported or re-exported, the exact quantity of caviar must be indicated on any secondary container in addition to the description of the content in accordance with international Customs regulations.

- g) The same information that is on the label affixed to the container must be given on the export permit or re-export certificate, or in an annex attached to the CITES permit or certificate.
- h) In the event of inconsistencies between information on a label and a permit or certificate, the Management Authority of the importing Party should contact its counterpart in the exporting or re-exporting Party as soon as possible to establish whether this was a genuine error arising from the complexity of information required by these guidelines. If this is the case, every effort should be made to avoid penalizing those involved in such transactions.
- i) Parties should accept shipments of caviar only if they are accompanied by appropriate documents containing the information referred to in paragraph c), d) or e).

Annex 2

Codes for identification of Acipenseriformes species, hybrids and mixed species

| Species | Code |
|------------------------------------------|------|
| <i>Acipenser baerii</i> | BAE |
| <i>Acipenser baerii baicalensis</i> | BAI |
| <i>Acipenser brevirostrum</i> | BVI |
| <i>Acipenser dabryanus</i> | DAB |
| <i>Acipenser fulvescens</i> | FUL |
| <i>Acipenser gueldenstaedtii</i> | GUE |
| <i>Acipenser medirostris</i> | MED |
| <i>Acipenser mikadoi</i> | MIK |
| <i>Acipenser naccarii</i> | NAC |
| <i>Acipenser nudiiventris</i> | NUD |
| <i>Acipenser oxyrhynchus</i> | OXY |
| <i>Acipenser oxyrhynchus desotoi</i> | DES |
| <i>Acipenser persicus</i> | PER |
| <i>Acipenser ruthenus</i> | RUT |
| <i>Acipenser schrenckii</i> | SCH |
| <i>Acipenser sinensis</i> | SIN |
| <i>Acipenser stellatus</i> | STE |
| <i>Acipenser sturio</i> | STU |
| <i>Acipenser transmontanus</i> | TRA |
| <i>Huso dauricus</i> | DAU |
| <i>Huso huso</i> | HUS |
| <i>Polyodon spathula</i> | SPA |
| <i>Psephurus gladius</i> | GLA |
| <i>Pseudoscaphirhynchus fedtschenkoi</i> | FED |
| <i>Pseudoscaphirhynchus hermanni</i> | HER |
| <i>Pseudoscaphirhynchus kaufmanni</i> | KAU |
| <i>Scaphirhynchus albus</i> | ALB |
| <i>Scaphirhynchus platyrhynchus</i> | PLA |

| Species | Code |
|-----------------------------------------------------------------------------------------|---------|
| <i>Scaphirhynchus suttkusi</i> | SUS |
| Mixed species (for 'pressed' caviar exclusively) | MIX |
| Hybrid specimens: code for the species of the male x code for the species of the female | YYYxXXX |

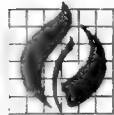
Part II. Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database



**A REPORT TO THE
EUROPEAN COMMISSION**

Prepared by the
**United Nations Environment Programme -
World Conservation Monitoring Centre**

October 2008
(Revised January 2009)



UNEP WCMC



UNEP WCMC

UNEP World Conservation Monitoring Centre
219 Huntingdon Road
Cambridge
CB3 0DL
United Kingdom
Tel: +44 (0) 1223 277314
Fax: +44 (0) 1223 277136
Email: species@unep-wcmc.org
Website: www.unep-wcmc.org

ABOUT UNEP-WORLD CONSERVATION MONITORING CENTRE

The UNEP World Conservation Monitoring Centre (UNEP-WCMC), based in Cambridge, UK, is the specialist biodiversity information and assessment centre of the United Nations Environment Programme (UNEP), run cooperatively with WCMC 2000, a UK charity. The Centre's mission is to evaluate and highlight the many values of biodiversity and put authoritative biodiversity knowledge at the centre of decision-making. Through the analysis and synthesis of global biodiversity knowledge the Centre provides authoritative, strategic and timely information for conventions, countries, organisations and countries to use in the development and implementation of their policies and decisions.

The UNEP-WCMC provides objective and scientifically rigorous procedures and services. These include ecosystem assessments, support for the implementation of environmental agreements, global and regional biodiversity information, research on threats and impacts, and the development of future scenarios.

CITATION

UNEP-WCMC (2008). *Analysis of EC Trade in Caviar by Species and Tracking of Caviar Permits within the UNEP-WCMC Caviar Database*. A Report to the European Commission. UNEP-WCMC, Cambridge.

PREPARED FOR

The European Commission, Brussels, Belgium

DISCLAIMER

The contents of this report do not necessarily reflect the views or policies of UNEP or contributory organisations. The designations employed and the presentations do not imply the expressions of any opinion whatsoever on the part of UNEP, the European Commission or contributory organisations concerning the legal status of any country, territory, city or area or its authority, or concerning the delimitation of its frontiers or boundaries.

© Copyright: 2008, European Commission

Table of Contents

I. Introduction 1

II. Methods..... 2

III. EC Caviar Imports and (Re-)Exports in the Global Context..... 4

Imports 4

EC Exports and re-exports..... 5

IV. Species Analysis 9

1. *Acipenser persicus* 11

2. *Acipenser stellatus* 13

3. *Acipenser gueldenstaedtii* 17

4. *Huso huso* 19

5. *Polyodon spathula*..... 21

6. *Acipenser transmontanus*..... 24

7. *Huso dauricus*..... 28

8. *Acipenser nudiiventris*..... 30

9. *Acipenser schrenckii* 31

10. *Acipenser baerii*..... 33

11. *Acipenser* spp. & *Acipenseriformes* spp..... 34

V. Compliance with reporting requirements of Conference Resolution 12.7 (Rev. CoP14).35

VI. Conclusions.....37

Recommendations.....39

References 41

Annex A..... 42

Annex B: 45

I. Introduction

This report was prepared in two parts; Part I was produced by TRAFFIC (hereafter referenced as Engler and Knapp, 2008) with a focus on global caviar trends and with an EC emphasis on importing and exporting Member States. This report (Part II), was produced by UNEP-WCMC, and takes a species-specific approach to analysing caviar trade trends within the European Community. It includes an initial analysis of data held within the Caviar Database and presents the results of complex data queries which enable related caviar permits to be tracked over time to highlight any incidences of potentially illicit trade. This preliminary report is the first of two that will be produced by UNEP-WCMC under the service contract with the European Commission on the caviar trade within the European Community.

At the 10th Conference of Parties to CITES, all *Acipenseriformes*, or species of sturgeon and paddlefish, were listed in Appendix II of CITES. The listing, which came into force in April 1998, added a further 23 species to the four species already listed in the Appendices. Accordingly, the entire Order is listed in Annex B of the EC Wildlife Trade Regulation¹, with the exception of two species, *Acipenser brevirostrum* and *Acipenser sturio*, that are listed in Appendix I and Annex A. There is concern about the status of all species of *Acipenseriformes*, whose eggs are processed into valuable caviar. Wild stocks have substantially declined in recent decades (Pikitch *et al.*, 2005). Contributory factors include the decrease in natural spawning sites, changes in regulation of water flow, pollution, over-exploitation, poaching and illegal trade. Accordingly, the IUCN has classified six species as Critically Endangered, eleven as Endangered, six as Vulnerable, two are considered Near Threatened and six are of lower risk, Least Concern (IUCN, 2007). Provisional status assessments for five European sturgeon species have been elevated to Critically Endangered: *Acipenser persicus*, *A. stellatus*, *A. gueldenstaedtii*, *A. nudiiventris*, and *Huso huso* (Kottelat & Freyhof, 2007).

Caviar Database

A database of caviar trade was established by UNEP-WCMC in 2007 to monitor the legal origin of caviar in international trade, check export quota compliance, track shipments of caviar across the world and identify any potential illegitimate use of CITES permits. The Caviar Database records the details of permits issued for caviar reported by exporting and re-exporting Parties on a near-real time basis. Resolution Conference 12.7 (Rev. CoP14), specifically relating to the conservation and trade in sturgeon and paddlefish, recommends that all CITES Parties submit copies of caviar permits and certificates no later than one month after they have been issued either directly to UNEP-WCMC or via the CITES Secretariat for inclusion in the database. This enables importing Parties to verify the validity and authenticity of export or re-export permits recently issued prior to issuing a corresponding import permit. It also allows analyses to be conducted in near real-time. This

¹ EC Regulation No. 338/97

is in contrast to the CITES Trade Database, which is compiled following the 31st October submission deadline for annual reports by the Parties². Trade data included within the Caviar Database were reported by exporters and in some case by importers where the (re-) exporter has not submitted details of their exports. Management Authorities of EC Member States may access the online Caviar Database securely by password only via the CITES forum at: <http://www.cites.org/forum/forum.php>

The Caviar Database electronically links a permit from the country of origin to subsequent re-export permits, and, if previously re-exported, to the re-export permit from a third Party. Consignments of caviar within trade can thus be tracked from the country of origin via any other exporter to the latest country of import. Quantities can be checked to see whether the amount of caviar re-exported by any country (or collectively by the EC) exceeds the quantity imported, as indicated on the previous (re-)export permit. This may enable fraudulent permits to be detected and may be of particular relevance to the EC, where a re-exporting Member State may not be the same Member State which imported the caviar. Quota excesses by range States can also be detected.

The analysis outlines the importance of the EC caviar trade in the global context, and also provides an overview of the trends in caviar trade within the EC by analysing the information submitted by Member States of the European Community (EC), hereafter referred to as Member States, in their annual reports (1998-2006). This analysis includes countries which acceded to the European Community within the 'EC' from the year they acceded onwards, but did not include Bulgaria and Romania, which acceded to the EC in 2007. The trade within both the CITES trade and Caviar databases was analysed to determine firstly if range State export quotas had been adhered to, and secondly whether quantities of caviar re-exported by Parties remained lower than the quantities reported imported, by tracking permits. This included trade within the Member States of the European Community, which are large importers and re-exporters of caviar, and are also producer countries. Consideration is also given to the reporting requirements of Conference Resolution 12.7 (Rev. CoP14) and whether EC Member States and other Parties have submitted copies of caviar export and re-export permits within the deadlines specified to either UNEP-WCMC or the CITES Secretariat.

II. Methods

An analysis of the volume of imports of caviar from *Acipenseriformes* (under the term 'eggs (kg)' or 'caviar') to the EC Member States over the nine year period 1998-2006 was undertaken to identify the key species and the relevant sources within EC trade. For EC

² Parties are required to submit annual reports under the provisions of Article VIII, paragraph 7 (a) of the Convention. The Conference of the Parties and Secretariat have recommended that annual reports be submitted by 31 October following the year for which they are due, and following the guidelines for the preparation of such reports.

imports, the analysis selected only trade under the source codes W (wildtaken), C (captive bred), and F (born in captivity). Trade in ranched specimens (source code R) was excluded from the analysis of imports, as only three transactions of ranched caviar were reported by EC Member States during the period 1998-2006. Trade with source codes U (unknown), I (confiscated or seized) and O (Pre-convention) were also excluded from the analysis. For the analysis of EC (re-)exports, source code R (ranched) was included, as trade was reported at notable levels.

Species were selected for in-depth analysis if they were imported to the EC at levels totalling 100kg or more over for the period 1998-2006. For each species, export quota compliance was assessed for each range State which had established a quota, for either wild or captive produced caviar (source C or F). Secondly, permits were tracked to ensure quantities of re-exports remained lower or equal to the quantity that was reported imported.

Quota Compliance

To determine range State quota compliance, exporter and importer reported trade data for caviar of wild and captive sources (C or F) was extracted from the CITES Trade Database for the period 1998-2006. Additional data for 2005 to 2007 were extracted from the Caviar Database to complete the analysis. To minimise double-counting end-of-the-year trade (where exports are reported by importers in the following calendar year), permits were consulted. Import data was included as part of the previous year's trade when the corresponding export permit was issued in the previous year. Where export quotas had been exceeded, as declared by either the exporting range State or the collective importing Parties, EC importer data was consulted to determine whether any caviar was imported to the EC during that year. EC import data was also corrected to avoid end-of-year discrepancies. Quotas for shared stocks were required following adoption of Conference Resolution 12.7 in 2003. Where a quota was not established but exports were reported by the range State, these data were included. It was also noted where EC importer data exceeded that reported by the exporter.

Permit Tracking

To identify potential illegitimate uses of CITES permits, data within the Caviar Database from wild and captive sources for the years 2005 to 2007 were analysed to check that quantities of caviar (re-)exported by Parties (including EC Member States) remained lower than the quantities reported imported by tracking individual CITES permits. Trade data for 2008 is also included within the database and permit tracking was also undertaken for 2008 trade so far reported. Quota compliance checks for 2008 are, however, not yet possible as the reporting year is incomplete. All trade data within the Caviar Database are recorded in kg (converted from grammes if necessary) and all permits entered to date have been issued with purpose code T (commercial). The source of caviar imported to the EC for each species selected was analysed for the period 1998-2006. If trade was reported from captive sources

during this period, then permit analysis was also undertaken for those species for source codes C and F.

Mixed caviar, which combines eggs from several species of sturgeon or paddlefish, may be reported within trade as *Acipenseriformes* spp. or *Acipenser* spp., and whilst the relevant species may be listed individually on the (re-)export permit, relative quantities of each species are not recorded which makes analysis of trade recorded at higher taxon levels difficult. As a result, mixed caviar will not be covered in depth as part of this analysis.

Since the adoption of Conference Resolution 12.7, quotas for caviar are published annually if the CITES Secretariat is satisfied that the criteria within the resolution (and its subsequent revisions) have been complied with. Export quotas generally relate to a calendar year (1 January to 31 December); however, from 2008 onwards export quotas for caviar from shared stocks are subject to export quotas with the quota year 1 March – last day of February.

III. EC Caviar Imports and (Re-)Exports in the Global Context

Imports

As declared by importers, the EC imported 46% of caviar (654601 kg) from all sources during 1998-2006 and is clearly a major global market (Figure 1). When exports to the EC and the rest of the world ('RoW') as reported by the exporters are compared, the EC represents 33% of the market (Figure 2). There is often a tendency for exporting countries to report greater quantities of species (or their parts and derivatives) as exports than importers report as imports. This is because trade is often reported on the basis of permits issued rather than actual trade. For the caviar trade however, the reverse trend appears to be true. Exporters of caviar consistently reported exporting smaller quantities than importers reported importing during 1998-2006. The discrepancies between importer and exporter trade can, to some degree, be attributed to a lack of reporting by key caviar exporters, which is discussed further in Section V.

Overall, trade in caviar to both the EC and the RoW appears to be declining over this nine-year period according to both importers and exporters. Whilst the vast majority of EC caviar imports during 1998-2006 were from a wild source (Engler & Knapp, 2008), there has been a shift in the source of caviar in trade to the EC, with declining volumes of wild caviar imported and proportionally greater volumes of captive produced caviar imported. An analysis of 2006 EC annual reports to CITES indicates that in 2006, 4203 kg (27%) of all caviar imported to the EC comprised captive produced specimens, compared to 9% of imports in 2005 and only 2% in 2004 (UNEP-WCMC, 2008³). Reported imports from all countries suggest that this trend is a global phenomenon (Engler & Knapp, 2008). All EC Member

³ UNEP-WCMC (2008). Analysis of the European Community, Accession and Candidate Countries' Annual reports to CITES 2006. A Confidential Report to the European Commission.

States except Estonia, Ireland and Slovakia reported imports of caviar (from any source) during 1998-2006. The main EC importing nations for both wild and captive produced caviar are, in order of importance, Germany and France (Engler & Knapp, 2008). The species imported to the EC in highest volumes are considered in depth in section IV.

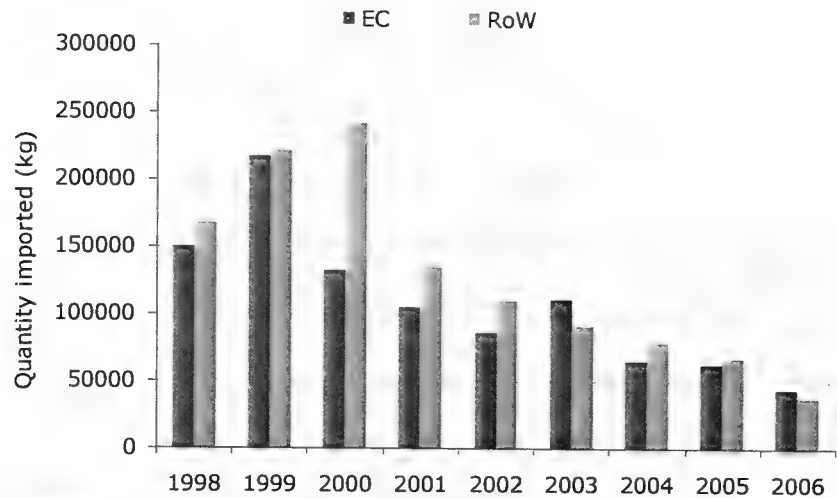


Figure 1. Importer-reported imports of caviar by the EC and the rest of the world (RoW), 1998-2006 (all sources, all Acipenseriformes)

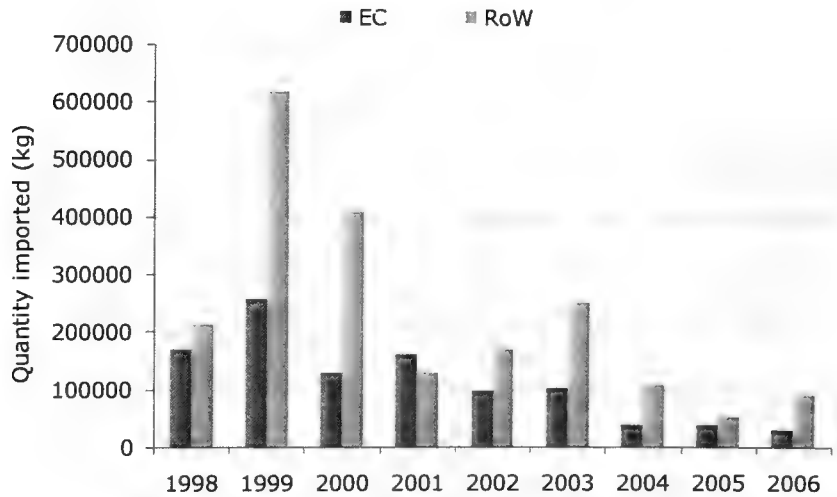


Figure 2. Exporter-reported exports of caviar to the EC and the rest of the world, 1998-2006 (all sources, all Acipenseriformes)

EC Exports and re-exports

The total volume of caviar exported and re-exported from the EC during 1998-2006 was 239560 kg, roughly a third of the quantity imported. Until the accession of Bulgaria to the

European Community in 2007, the EC was not a 'range State' for Acipenseriformes, and it did not export wild caviar originating within the EU. Trade from the EC comprised re-exports of wild caviar or direct exports of captive produced or ranched caviar (Figure 3). Overall trade volumes were variable during 1998-2006; but there has been a shift in sources. During 2004-6 the EC (re-)exported decreasing volumes of wild-sourced caviar and increasing volumes of caviar produced in captivity.

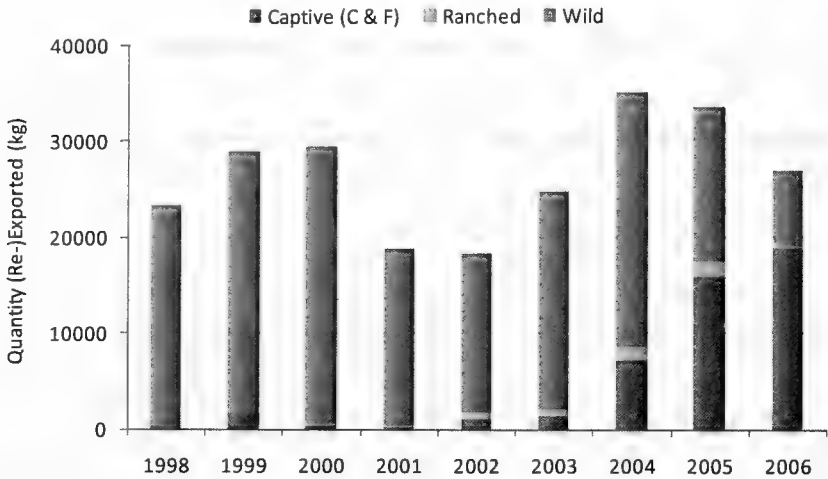


Figure 3. EC-Reported Exports and Re-Exports of Wild, Captive (Source C & F) and Ranched caviar, 1998-2006

Wild-taken Re-exports

Corresponding to a decrease in imports of wild caviar to the EC over the nine year period, re-exports of wild caviar from the EC diminished substantially after 2004 (Figure 4). Ossetra caviar (derived from *A. persicus*) was re-exported in the largest volumes (59713 kg). Re-exports of sevruga caviar (from the species *A. stellatus*) were 56458 kg over this period.

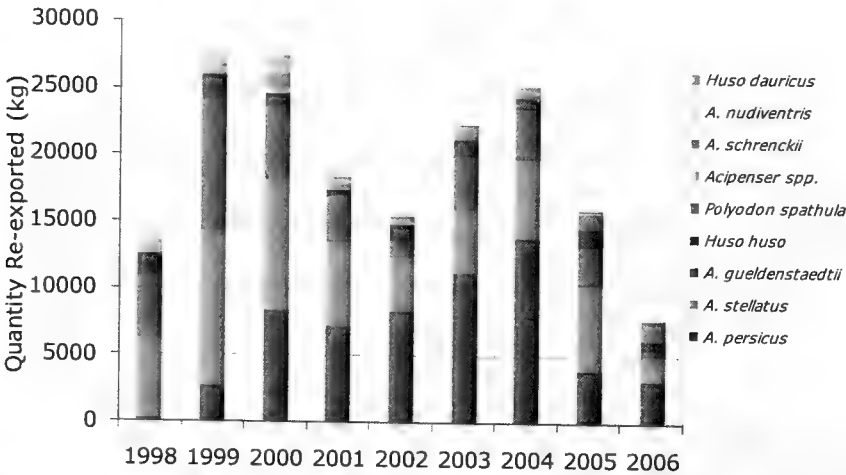


Figure 4. EC-reported re-exports of wild-sourced caviar originating outside the EC, 1998-2006

Included within the wild caviar re-exported by the EC countries in the figure above is 274 kg of wild-sourced caviar originating from Bulgaria and 3902 kg of wild-sourced caviar from Romania.

Captive Production within the EC

Caviar produced from aquaculture (source C, F, or R) within the EC for the export market substantially increased between 1998 and 2006, from 280 kg in 1998 to 18100 kg in 2006. France, Italy and Germany, in order of importance, were the main Member States of export. While several species of sturgeon and paddlefish (and hybrids thereof) are bred in aquaculture within the EC, two species in particular are predominantly produced for the caviar export market: *Acipenser baerii* and *Acipenser transmontanus*.

Direct exports of *Acipenser baerii* accounted for 64% of EC exports of caviar (excluding re-exports) and have increased markedly since 1998 despite a slight decrease in 2006 (Figure 5). This species was primarily exported by France, the Member State of origin. *Acipenser transmontanus* accounted for 34% of EC direct exports, with three other species accounting for the remaining 2% (*Acipenser gueldenstaedtii*, *Acipenser naccarii*, and *Acipenser* hybrids) (Figure 6). While direct trade in *Acipenser baerii* decreased slightly between 2005 and 2006, the direct exports of *Acipenser transmontanus* have steadily increased since 2002. These two species combined account for the overall increasing trend in captive-produced direct exports from the EC.

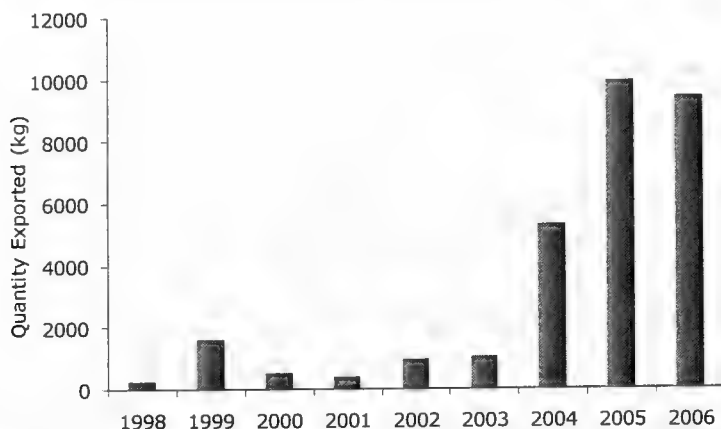


Figure 5. EC-reported direct exports of *Acipenser baerii*, Source: C, F, R, 1998-2006

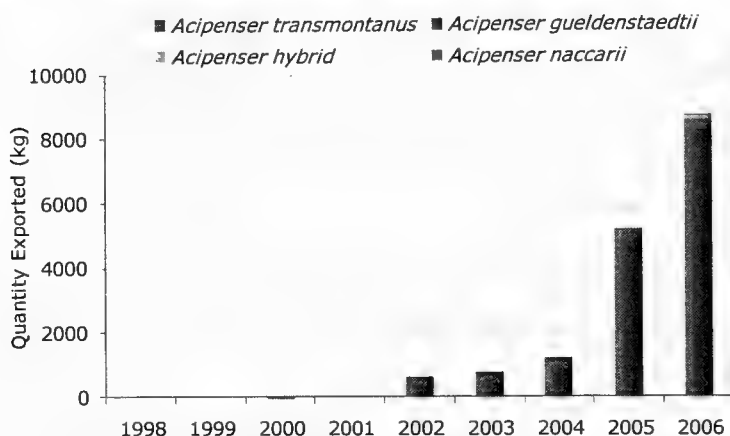


Figure 6. EC-reported direct exports of remaining four taxa traded (excluding *A. baerii*), source C, F, R, 1998-2006.

Italy reported exports of 4351 kg of ranched caviar during 1998-2006, predominantly of the species *Acipenser transmontanus*. Source code R could be appropriate where wild specimens are reared to sexual maturity then eggs are removed from adult females to be processed into caviar. However, there is a need to re-define the word 'ranching' within the Convention, as the current definition (Conf. Res 11.16 Rev. CoP14 relating to populations transferred from Appendix I to II) implies this production system is appropriate for only range States, where the ranching programme is beneficial to the conservation of the local population. Italy is not a range States for this species, however, no ranched trade has been reported exported by Italy since 2005.

IV. Species Analysis

Twelve taxa were imported to the EC at levels above 100 kg from all sources 1998-2006 and were selected for in depth review (Table 1). Species level analysis was undertaken for ten species identified, but *Acipenser* spp. and *Acipenseriformes* spp. are discussed together as meaningful analysis at the genus level is difficult. Incidences of any quota excesses for wild caviar are listed for each species, including where trade was reported but no quota was published. These cases are shaded within the tables. Prior to 2003 and the adoption of Conference Resolution 12.7, quotas for shared stocks were not required. Where a quota was not required, but importer data exceeded that reported by the exporter, this data was also included.

Permit tracking was undertaken for trade in all species in Table 1 from wild sources and additionally for captive bred (C or F) sources if species had been reported to the EC for those source codes during 1998-2006. Global trade routes for consignments of caviar can be complex; a single shipment can transit through several EC countries before reaching its final destination and after each individual re-export, a check is required to ensure the quantities of caviar re-exported do not exceed the quantity imported. One shipment of *Acipenser baerii*, for example, was captive produced in France, re-exported by another EC Member State (Germany) to the United Arab Emirates, re-imported to the EC via Luxembourg before being re-exported from the Community for the second time to Iceland. Whilst a tool to detect whether re-export quantities exceed the quantities imported at each level of re-export is being developed by UNEP-WCMC, an automated tool is currently only available for the first level of re-export. For this review, re-exports at subsequent levels were checked visually by eye, but not systematically totalled for the exact figures.

Table 1. EC-Reported imports of caviar (kg) for taxa imported at levels above 100 kg from wild and captive-bred sources (source codes W, F and C), 1998-2006

| Taxon | EC-reported Quantity Imported (kg) | Relative percentages of sources codes (%) | | | IUCN Red listing |
|----------------------------------|------------------------------------|-------------------------------------------|------|-------|------------------|
| | | 'W' | 'F' | 'C' | |
| <i>Acipenser persicus</i> | 212798.2 | 100 | 0 | 0 | Endangered* |
| <i>Acipenser stellatus</i> | 206195.7 | 99.8 | 0 | 0.2 | Endangered* |
| <i>Acipenser gueldenstaedtii</i> | 124868.1 | 98 | 0.1 | 1.9 | Endangered* |
| <i>Huso huso</i> | 39525.6 | 99 | 0 | 1.0 | Endangered* |
| <i>Polyodon spathula</i> | 9267.3 | 99.97 | 0.03 | 0 | Vulnerable |
| <i>Acipenser transmontanus</i> | 8516.6 | 1.2 | 98.8 | 0 | Least Concern |
| <i>Acipenser</i> spp. | 7606.5 | 99.9 | 0 | 0.01 | |
| <i>Huso dauricus</i> | 6932.5 | 100 | 0 | 0 | Endangered* |
| <i>Acipenser nudiiventris</i> | 4146.7 | 100 | 0 | 0 | Endangered* |
| <i>Acipenser schrenckii</i> | 3776.9 | 100 | 0 | 0 | Endangered* |
| <i>Acipenseriformes</i> spp. | 1375.0 | 99.99 | 0 | >0.01 | |
| <i>Acipenser baerii</i> | 1004.0 | 0.3 | 0.5 | 99.2 | Vulnerable* |

W= wild F = captive born, C = captive bred in accordance with Article 54 of EC Regulation 865/06

*with annotation by the IUCN that the listing requires updating

Of the species selected, caviar from two species was imported from primarily captive sources, *Acipenser transmontanus* and *A. baerii*. For the remaining species, EC imports of caviar were primarily from wildtaken specimens. Global threat status, according to the IUCN, is also listed in Table 1.

Where appropriate, individual permits comprising multiple species are compared in Annex A. Export and import data, as well as range State quotas are also presented by country in Annex B.

1. *Acipenser persicus*

The EC-reported imports of *Acipenser persicus* between 1998-2006 were entirely from wild sources (Figure 7). Reported imports in 2005-6 were substantially less than in previous years.

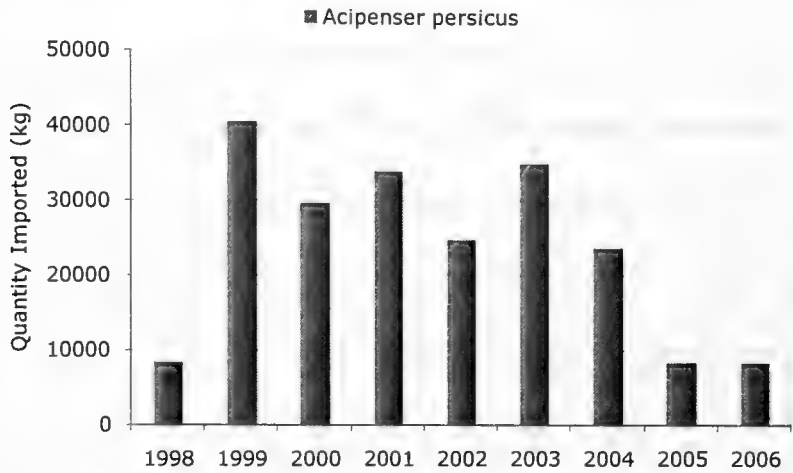


Figure 7. EC-reported imports of *Acipenser persicus* caviar (kg), all from wild sources, 1998-2006

No instances of quotas being exceeded were recorded in the CITES Trade Database for *Acipenser persicus* (Table 2). However, while export quotas for *Acipenser persicus* from range States appear to have been complied with, it should be noted that the Islamic Republic of Iran (hereafter referred to as Iran) did not published a quota in 1998. In that year, importer data far exceeded that reported by the exporter, by a factor of more than three. The main EC importer, of 6127kg, was France.

In 2000, Iran published a combined quota of 5200kg for *A. persicus* and *A. gueldenstaedtii* and whilst the combined quota was not reported exceeded by Iran, the total importer-reported imports for these two species exceeded the quota with 53087kg reported imported. As an example, the EC reported importing a quantity 4612kg more than Iran reported exporting for *A. persicus* in 2000. Iran has, however, published separate quotas for this species since 2001; for 2008 the quota is 37000kg.

Table 2. Incidences of importer data exceeding exporter data for wild *Acipenser persicus*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| Iran | 1998 | N/R | 2269.8 | 8442.9 | | | 6173.1 | 7913.5 |
| Iran | 2000 | 52000* | 30886.1 | 35498.9 | | | 4612.8 | 24518.1 |

*In 2000, Iran had a combined quota of 52000 for *A.persicus* and *Acipenser gueldenstaedtii*. According to exporter reported data, the combined quota for the two species was not exceeded. According to importers however, the combined imports of *A. persicus* (35498.9kg) and *A. gueldenstaedtii* (17588.28kg) exceeded the combined export quota by 1087 kg.

N/R denotes a quota was not required

Permit tracking for *A.persicus* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

2. *Acipenser stellatus*

All EC reported imports of *Acipenser stellatus* caviar between 1998 and 2006 were from wild sources (Figure 8), with the exception of 104 kg in 2005 and 334 kg in 2006 imported from captive sources.

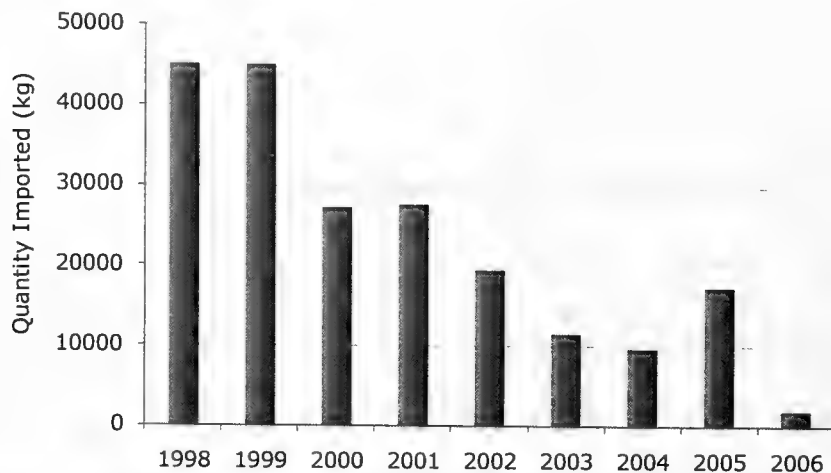


Figure 8. EC-reported imports of *Acipenser stellatus* caviar (kg), from wild sources, 1998-2006

There were five years where either the importer or exporter reported quotas being exceeded for wild *A. stellatus* during 1998-2006 (Table 3). Romania, now an EC Member State, reported exceeding their quota slightly for *Acipenser stellatus* from the NW Black Sea and Lower Danube River in 2000, but exports have since remained within quota (Annex B). Azerbaijan, Kazakhstan and Iran export caviar from shared Caspian Sea stocks of *A. stellatus*. The EC was a major importer of caviar direct from these range States during 1998-2006. Collectively, range States reported exceeding their quotas for *A. stellatus* over that period by 4809 kg. Iran reported exceeding their quota (by almost 1600 kg) in 1999 and Azerbaijan reported a total quantity of 3193 kg over its published quotas for 2004 and 2005.

Kazakhstan, however, did not report exports in 2005 nor have they done so since. Importer data indicates that in 2005 alone, Kazakhstan exceeded their export quota by 3423 kg. As identified by Engler & Knapp (2008), Kazakhstan also exported 203kg of *A. stellatus* caviar in 2006, yet an export quota had not been established. No EC Member States reported imports of this species from Kazakhstan in 2006 (Table 3.) It is therefore possible, that the true extent of exports beyond the quotas levels set for this species from the three Caspian Sea States over this period was 8417.5 kg.

Table 3. Incidences of range States exceeding their export quotas (blue highlight) for wild *Acipenser stellatus*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| Iran | 1998 | N/R | 36466.9 | 41847.7 | | | 5380.9 | 26299.0 |
| Romania | 1998 | N/R | 326.0 | 327.0 | | | 1.0 | 2.0 |
| Iran | 1999 | 40000 | 41598.7 | 38269.5 | 1598.7 | | | 24187.9 |
| Azerbaijan | 2000 | N/R | 305.0 | 205.0 | | | | |
| Romania | 2000 | 2100 | 2117.0 | 1941.0 | 17.0 | | | |
| Azerbaijan | 2004 | 2700 | 4849.4 | 4549.9 | 2149.4 | 1849.9 | | 2953.5 |
| Azerbaijan | 2005 | 2700 | 3743.7 | 3323.0 | 1043.7 | 623.0 | | 2789.4 |
| Kazakhstan | 2005 | 10490 | | 13912.6 | | 3422.6 | 13912.6 | 9316.0 |
| Kazakhstan | 2006 | N/P | | 203.1 | | 203.1 | 203.1 | |
| TOTALS | | | | | 4808.8 | 6098.6 | | |

N/R denotes a quota was not required; N/P denotes no quota published.

Permit tracking revealed a number of incidences where re-export permits apparently exceeded the quantities on the original import permits. Analysis of re-export permits of *A. stellatus* originating from Kazakhstan in 2005 highlighted a discrepancy with the quantities of caviar reported re-exported from the United Arab Emirates ('UAE'), (Table 4). On permit denoted as "B", Turkey reported re-exporting 1249.74 kg of *A. stellatus* to the UAE. The UAE, however, reported re-exporting a total of 1621.29kg originating from the same Turkish re-export permit to six other Parties (Luxembourg, Singapore, Saudi Arabia, Japan, the United States and Kuwait). The cumulative total of the nine permits issued by the UAE up to 25/9/06 were within the quantity of caviar reported imported. However, it appears that a further ten permits (highlighted in blue) were issued until 12/04/07 for a total amount of 371.55kg beyond the amount of caviar imported on the relevant Turkish permit. The cumulative quantity of caviar imported by Luxembourg alone apparently exceeds the quantity of caviar on the original re-export permit from Turkey to the UAE.

Secondly, it appears that Switzerland re-exported a greater quantity of *A. stellatus* acquired from Azerbaijan on the permit denoted as "A", than was originally imported from the country (Table 1, Annex A). It is notable that the quantity exceeded (20.38kg) equals exactly the quantity re-exported on permit "F" to Belgium, issued on 20/01/2008. This amount is also identical to the quantity of caviar issued on Swiss permit "C", to Italy on 12/12/07.

Individual permit tracking for other species identified in this review also revealed similar discrepancies for two additional species, *Acipenser gueldenstaedtii* and *Huso huso*, on the same original Azerbaijani export permit, "A". These are presented in Annex A to enable a comparison of importing and exporting Parties (Tables 1-3). It is clear that only one re-export permit caused the irregularity for all three species. This permit (highlighted in blue) was issued by Switzerland on 20/01/08, with destination Belgium. In each case, the

quantities re-exported are identical to a previous permit "C" issued on 12/12/07, with destination Italy.

Detection of such cases could indicate that an attempt has been made to re-export more caviar than was originally imported. The discrepancies highlighted above were brought to the attention of the Management Authorities of the United Arab Emirates and Switzerland. The Swiss Management Authority confirmed that the re-exports from Switzerland to Italy did not take place, and the caviar was alternatively re-exported to Belgium in identical quantities. The Management Authority of the UAE confirmed that one re-export permit for 449kg of *A. stellatus* imported from Turkey on the above permit number had been cancelled, and that the quantity of a second re-export permit had been reduced. Following clarification of these details, the quantities of *A. stellatus* re-exported were all within the amounts specified on the original import permits.

It is therefore important that Management Authorities inform UNEP-WCMC of the details of any caviar permits which are cancelled or returned to them unused, so that the caviar database can be updated and reflect the actual quantities in trade.

Table 4. Re-export Permit ("B") for *Acipenser stellatus* caviar from Turkey, apparently exceeded by United Arab Emirates on re-exports

| Origin | | Country | Importer1 | Importer2 | Importer3 | Permit | Purpose | Source | Date of Issue | Amount | Cumulative Total |
|------------------------|-----------------------|---------|-------------------|----------------------|-----------|--------|---------|--------|---------------|---------|------------------|
| Original Export | Kazakhstan | | Turkey | | | A | T | W | 13/12/2005 | 1249.74 | |
| Re-export to U.A.E. | Kazakhstan (Permit A) | | Turkey | United Arab Emirates | | B | T | W | 30/01/2006 | 1249.74 | |
| Re-exports from U.A.E. | Kazakhstan (Permit A) | | Turkey (Permit B) | United Arab Emirates | | | | | | | |
| | | | | Luxembourg | C | T | W | W | 12/02/2006 | 190 | 190 |
| | | | | Luxembourg | D | T | W | W | 04/03/2006 | 449.28 | 639.28 |
| | | | | Luxembourg | E | T | W | W | 11/03/2006 | 225.92 | 865.2 |
| | | | | Luxembourg | F | T | W | W | 10/07/2006 | 90.21 | 955.41 |
| | | | | Luxembourg | G | T | W | W | 30/07/2006 | 158.32 | 1113.73 |
| | | | | Singapore | H | T | W | W | 06/08/2006 | 0.1 | 1113.83 |
| | | | | Singapore | I | T | W | W | 27/08/2006 | 1 | 1114.83 |
| | | | | Saudi Arabia | J | T | W | W | 12/09/2006 | 50 | 1164.83 |
| | | | | Saudi Arabia | K | T | W | W | 12/09/2006 | 0.61 | 1165.44 |
| | | | | Luxembourg | L | T | W | W | 25/09/2006 | 156.46 | 1321.9 |
| | | | | Luxembourg | M | T | W | W | 08/11/2006 | 89.9 | 1411.8 |
| | | | | Japan | N | T | W | W | 19/11/2006 | 1.8 | 1413.6 |
| | | | | Saudi Arabia | O | T | W | W | 18/12/2006 | 87.5 | 1501.1 |
| | | | | United States | P | T | W | W | 23/01/2007 | 22.8 | 1523.9 |
| | | | | Japan | Q | T | W | W | 15/02/2007 | 1.2 | 1525.1 |
| | | | | United States | R | T | W | W | 26/02/2007 | 90.38 | 1615.48 |
| | | | | Saudi Arabia | S | T | W | W | 01/03/2007 | 2.45 | 1617.93 |
| | | | | Japan | T | T | W | W | 20/03/2007 | 2.4 | 1620.33 |
| | | | | Kuwait | U | T | W | W | 12/04/2007 | 0.96 | 1621.29 |

Total re-exported Amount Exceeded 1621.29 kg 371.55 kg

3. *Acipenser gueldenstaedtii*

EC-reported imports of *Acipenser gueldenstaedtii* have been variable over the period 1998-2006 (Figure 9). Imports were primarily from wild sources until 2005, but in 2006, the trade involved predominately captive bred specimens (sources C and F).

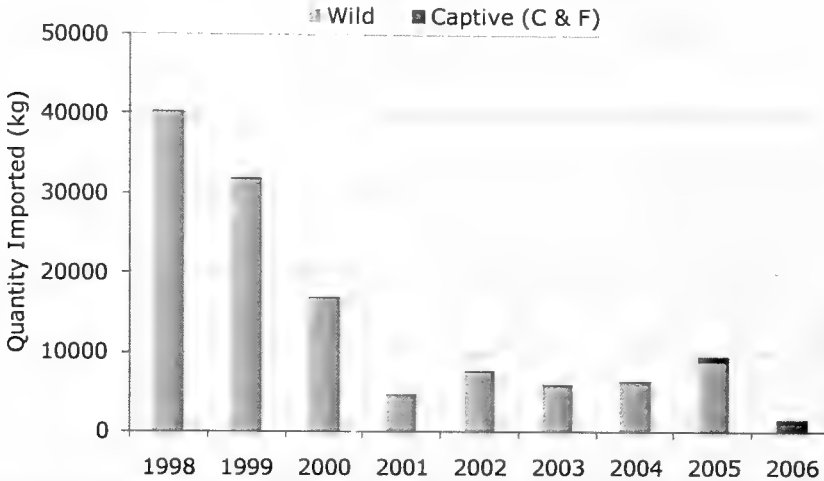


Figure 9. EC-Reported imports of *Acipenser gueldenstaedtii* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

There were six years in which exporter and/or importer data show that range States exceeded quotas for wild *A. gueldenstaedtii* during 1998-2006 (Table 5, highlighted in blue). Range States exporting *A. gueldenstaedtii* from shared stocks of the Caspian Sea (Azerbaijan, Kazakhstan and Iran) collectively reported exceeding their quotas by 4127 kg during the period 1998-2007. Importers reported a comparable quantity of 4085 kg over quota levels. In 2005, Azerbaijan exceeded their quota by 1952kg; the EC collectively imported the entire years' quota plus an additional 745kg of *Acipenser gueldenstaedtii* caviar. Kazakhstan reported no exports for 2005 (as for all species), yet importers recorded 811kg caviar imported above the quota limit of 3100kg for this country; the EC was a significant importer, reporting imports of 3070kg. Also, as discussed *infra*, the 52000 kg joint quota set by Iran in 2000 for *A. gueldenstaedtii* and *A. persicus* was exceeded according to importer data (53087 kg), but not according to exporter data.

In accordance with the requirements of Conf. Res. 12.7 (Rev. CoP14), no quotas were published for *Acipenser gueldenstaedtii* range States in 2006, but quotas for both Azerbaijan and Kazakhstan were published for 2007. Both Parties have appeared to adhere to quotas set for 2007 (Annex B), based on trade reported by importers and recorded within the Caviar Database.

Table 5. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser gueldenstaedtii*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| Romania | 1998 | N/R | 389.0 | 410.0 | | | 21.0 | 4.0 |
| Iran | 1998 | N/R | 54005.6 | 50894.2 | | | | 34558.0 |
| Bulgaria | 2000 | N/R | 25.4 | 3.0 | | | | |
| *Iran | 2000 | *52000 | 15186.9 | 17588.28 | | | 2401.38 | 5832.95 |
| Kazakhstan | 2001 | 3200 | 3837.8 | 3224.0 | 637.8 | 24.0 | | |
| Iran | 2002 | 2100 | 2363.7 | 2535.9 | 263.7 | 435.9 | 172.1 | 1175.6 |
| Kazakhstan | 2002 | 4880 | 5150.5 | 3269.5 | 270.5 | | | |
| Azerbaijan | 2004 | 3780 | 4783.1 | 5016.2 | 1003.1 | 1236.2 | 233.1 | 2819.0 |
| Bulgaria | 2005 | 0 | | 25.5 | | | 25.5 | |
| Azerbaijan | 2005 | 3780 | 5732.3 | 5357.7 | 1952.3 | 1577.7 | | 4525.5 |
| Kazakhstan | 2005 | 3100 | | 3911.2 | | 811.2 | 3911.2 | 3070.0 |
| TOTALS | | | | | 4127.3 | 4085.0 | | |

N/R denotes a quota was not required

*In 2000, Iran has a combined quota of 52000 for *A. persicus* and *Acipenser gueldenstaedtii*. According to exporter reported data, the combined quota for the two species was not exceeded. According to importers however, the combined imports of *A. persicus* (35498.9kg) and *A. gueldenstaedtii* (17588.28kg) exceeded the combined export quota by 1087 kg.

Analysis of re-export permits for *Acipenser gueldenstaedtii* revealed one apparent irregularity, a re-export from Switzerland, as previously discussed under *A. stellatus*.

4. *Huso huso*

EC-reported imports over the period 1998-2006 have been almost entirely from wild sources (Figure 10). Collectively, the Caspian Sea range States of Azerbaijan, Kazakhstan and Iran reported exporting 6161 kg of caviar from the species *Huso huso* in excess of the combined export quota quantities published for the period 1998-2006 (Table 6). According to importer reported data, the quotas were exceeded by 6778 kg representing the most significant incidence of quota non-compliance for all species included in this analysis.

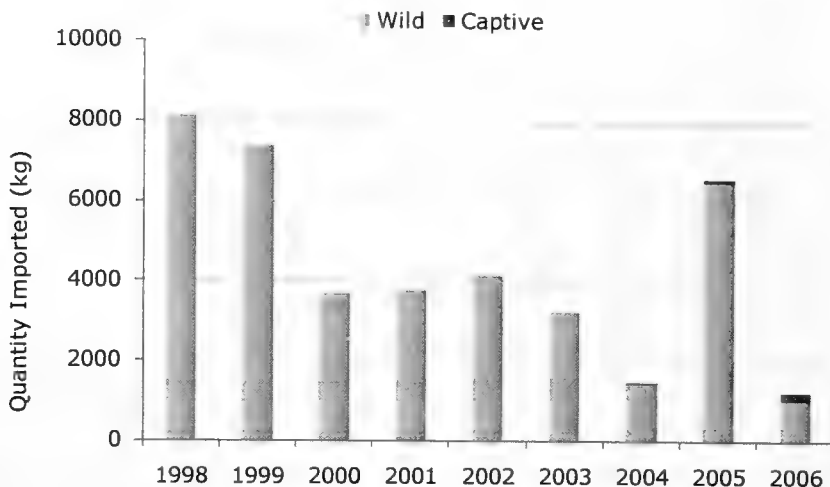


Figure 10. EC-Reported *Huso huso* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006.

In 2001, exporter data show that Kazakhstan exceeded their quota by 2936 kg. This represents the highest quota excess for an individual species in one quota year (also highlighted by Engler & Knapp, 2008). According to importer data, Kazakhstan exceeded their quota by 2482 kg in 2001. The EC did not report imports from Kazakhstan in 2001. In addition, Kazakhstan also reported exceeding its quota in 2005 by 2002 kg. The EC did however, report imports of 4202 kg in 2005, some 1600kg above the published quota level. Kazakhstan also exported 199kg of *Huso huso* caviar in 2006 yet an export quota had not been established (Engler & Knapp 2008). No EC Member States reported imports of this species from Kazakhstan in 2006 (Table 6).

Iran substantially exceeded their quota of 1720kg for *H. huso* in 2003, notably the EC reported imports of 2048kg for that year.

Bulgaria, which has now acceded to the European Union, exceeded their export quota for *H. huso* from the NW Black Sea and Lower Danube River stock in 2000 and 2002, but has since remained within quota for wild stocks (Annex B). Romania, also now an EC Member State, reported exporting a small quantity of 7 kg over quota in 1999. More significantly, the quota was exceeded (as reported by importers) by 267 kg in 2000 and by 207 kg in 2002, as reported by the exporter. In 2006, Romania adopted a 10 year moratorium on commercial catches of wild sturgeon and there have been no exports of caviar since then.

Table 6. Incidences of range States exceeding their export quotas (blue highlight) for wild-taken *Huso huso*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| Iran | 1998 | N/R | 2951.747 | 3236.28 | | | 284.533 | 3004 |
| Bulgaria | 1998 | N/R | 2392 | 1717.2 | | | | |
| Romania | 1998 | N/R | 873 | 533 | | | | 20 |
| Iran | 1999 | 3000 | 3530 | 3718 | 530 | 718 | 188 | 2323 |
| Romania | 1999 | 1750 | 1757 | 1709 | 7 | | | 974.77 |
| Bulgaria | 2000 | 2500 | 2747.5 | 2275.6 | 247.5 | | | |
| Azerbaijan | 2000 | N/R | 145.8 | 90 | | | | |
| Iran | 2000 | 3000 | 3454 | 2360 | 454 | | | 1598 |
| Romania | 2000 | 3200 | 3200 | 3467 | | 267 | 267 | 1584.27 |
| Kazakhstan | 2001 | 4200 | 7135.61 | 6681.84 | 2935.61 | 2481.84 | | |
| Bulgaria | 2002 | 1720 | 2327.8 | 1971 | 607.8 | 251 | | 70 |
| Romania | 2002 | 2180 | 2387 | 1879 | 207 | | | 1388.65 |
| Azerbaijan | 2003 | 400 | 561.9 | 362.05 | 161.9 | | | 91.4 |
| Iran | 2003 | 1720 | 2566.269 | 2369.388 | 846.27 | 649.388 | | 2048.8 |
| Azerbaijan | 2004 | 250 | 291.48 | 216.28 | 41.48 | | | 143.28 |
| Azerbaijan | 2005 | 250 | 372.776 | 458.976 | 122.77 | 208.976 | 86.2 | 304.976 |
| Kazakhstan | 2005 | 2600 | | 4602.6 | | 2002.6 | 4602.6 | 4202.6 |
| Kazakhstan | 2006 | N/P | | 198.934 | | 198.934 | 198.934 | |
| TOTALS | | | | | 6161.33 | 6777.74 | | |

N/R denotes a quota was not required; N/P denotes no quota published

Individual permit tracking for *Huso huso* revealed one apparent re-export permit irregularity by Switzerland, as discussed earlier under *A. stellatus*.

5. *Polyodon spathula*

This species is endemic to the United States of America. *Polyodon spathula* caviar imported by the EC during 1998-2006 was entirely from wild sources (Figure 11). Whilst EC imports of caviar from wild origin are declining for all other species reviewed, imports of wild caviar derived from this species appear to be increasing.

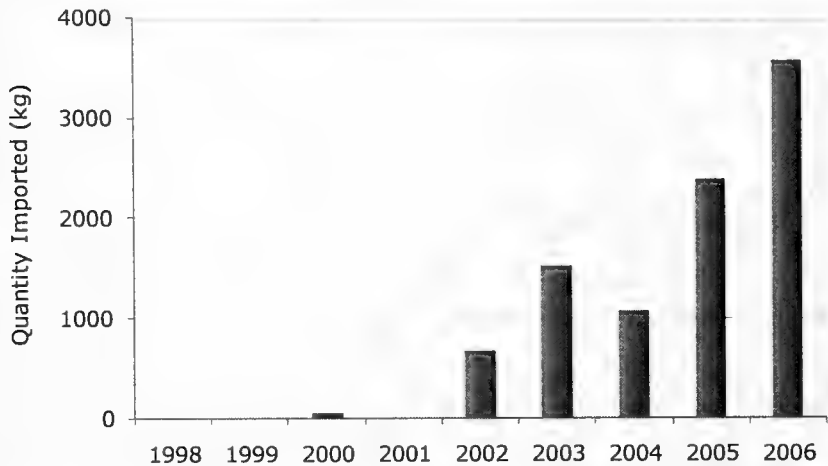


Figure 11: EC-reported imports of wild-sourced *Polyodon spathula* caviar (kg), 1998-2006

No quotas for wild *Polyodon spathula* have been published by the United States, but in several years, notably 2005 and 2007, importer data exceeds that reported by the exporter (Table 7). There are no reported exports of this species for 2007, as the United States has not reported on 2007 caviar trade (see Section V, compliance of reporting requirements of Conf. Res. 12.7 (Rev.CoP14).

Table 7. Incidences of importer data exceeding exporter data for *Polyodon spathula* as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| United States | 1998 | N/R | | 3.99 | | | 3.99 | |
| United States | 2000 | N/R | 3065.95 | 1193.63 | | | | 42.86 |
| United States | 2002 | N/R | 2627.53 | 2639.09 | | | 11.56 | 676.18 |
| United States | 2003 | N/R | 4380.79 | 4476.6 | | | 95.81 | 1525.77 |
| United States | 2004 | N/R | 4401.38 | 4108.14 | | | | 1067.7 |
| United States | 2005 | N/R | 4160.34 | 5017.86 | | | 857.52 | 2387.08 |
| United States | 2006 | N/R | 8591.83 | 6215.45 | | | | 3574.26 |
| United States | 2007 | N/R | | 7022.94 | | | 7022.94 | 7022.94 |

N/R denotes a quota was not required - this species is from endemic stock

Analysis of re-export permits for this species within the Caviar Database revealed that during 2006-2007, two Member States of the EC collectively re-exported 88.96kg of wild

caviar in excess of the quantity imported to the EC (via Belgium) on the relevant permit from the United States (Table 8). Spain reported re-exporting 49.09kg to the UAE and Belgium reported re-exporting a total of 414.40 kg back to the country of origin, the United States. The latter represented 39.87kg greater than the amount Belgium reported importing.

The Belgian Management Authority subsequently confirmed that one re-export (permit "C") for 218.6kg of caviar did not take place. The total quantity of caviar collectively re-exported by Member States Belgium and Spain was therefore less than the quantity imported to Belgium.

Table 8: Export Permit "A" for *Polyodon spathula* caviar originally exported from the United States to Belgium, apparently exceeded by EC Member States on re-exports

| Origin Country | | Importer1 | Re-exporter | Importer2 | Permit | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
|-------------------------------------------|--------------------------|-----------|-------------|----------------------|--------|---------|--------|---------------|-------------|------------------|
| Original Export Re-exports from the EC | United States | Belgium | | | A | T | W | 20/07/06 | 374.53 | |
| | United States (Permit A) | Belgium | Belgium | United States | B | T | W | 19/10/06 | 30.44 | 30.44 |
| | | | Belgium | United States | C | T | W | 30/10/06 | 218.60 | 249.04 |
| | | | Belgium | United States | D | T | W | 30/10/06 | 57.0 | 306.04 |
| | | | Belgium | United States | E | T | W | 14/11/06 | 48.69 | 354.73 |
| | | | | United Arab Emirates | F | T | W | 21/12/06 | 49.09 | 403.82 |
| | | | Spain | Emirates | | | | | | |
| | | | Belgium | United States | G | T | W | 06/02/07 | 31.03 | 434.85 |
| | | | Belgium | United States | H | T | W | 28/02/07 | 28.64 | 463.49 |
| | | | | | | | | | | |

Total Re-exported Amount Exceeded 463.49 kg 88.96 kg

6. *Acipenser transmontanus*

EC imports of *A.transmontanus* were predominantly from captive bred sources (Figure 12). A notable increase in reported imports of this species can be seen in 2005 and 2006, compared to no imports during 1998-2000 and moderate imports between 2001 and 2004.

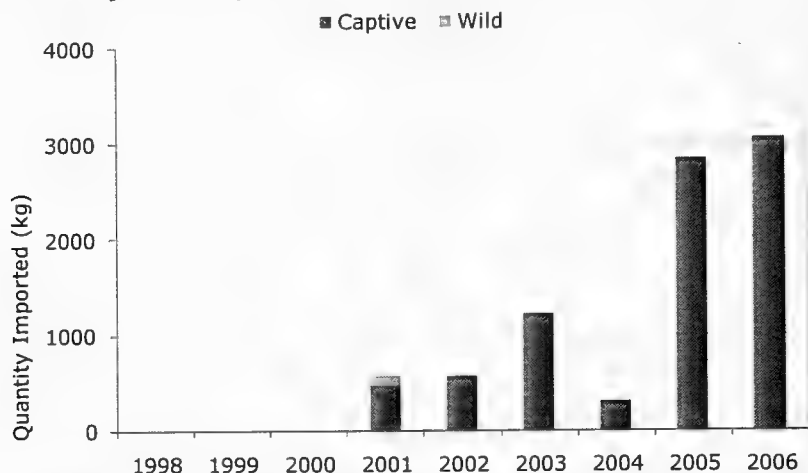


Figure 12. EC-Reported imports *Acipenser transmontanus* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

A quota of 3500kg for captive produced caviar of *Acipenser transmontanus* was published by the United States in 2001. The quota was not exceeded, however importer reported data were greater than exporter reported data (Table 9). Import data was higher in a number of instances, the most significant being in 2007. Export quotas were exceeded in 2002 and 2003 and during these years the United States published a zero quota. No export quotas have subsequently been published by the United States.

Table 9. Incidences of range States exceeding their export quotas (blue highlight) for captive produced *Acipenser transmontanus*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| United States | 1998 | N/R | | 1 | | | | |
| United States | 1999 | N/R | | 23 | | | 45 | |
| United States | 2001 | 3500 | 418.34 | 568.86 | | | 150.52 | 560.86 |
| United States | 2002 | 0 | 582 | 564 | 582 | 564 | | 560 |
| United States | 2003 | 0 | 227 | 1209.79 | 227 | 1209.79 | 982.79 | 1209.79 |
| United States | 2004 | N/R | 2577 | 373 | | | | 305 |
| United States | 2005 | N/R | 2215.57 | 2993.32 | | | 777.75 | 2840 |
| United States | 2006 | N/R | 3312 | 3025 | | | | 3025 |
| United States | 2007 | N/R | | 2854.11 | | | 2854.11 | 2854.11 |
| TOTALS | | | | | 809 | 1773.79 | | |

N/R denotes a quota was not required – imports of caviar for this species were from captive produced sturgeon

Analysis of permits for this species within the Caviar Database revealed that France apparently re-exported a greater quantity of source F caviar than was imported on permit denoted as "A" dated 06/06/07 from the United States (Table 10). Details of three re-export permits; all issued in 2008 with destination the United States were submitted by France for inclusion in the Caviar Database. The total quantity of these re-exports exceeds the quantity imported to France by 55.26kg. It was notable that the French department of issue was consistent for all (Paris). The French Management Authority confirmed that permit "C" had been issued, however the actual quantity re-exported from France was 18.6kg, not 190kg. Actual French re-exports of *Acipenser transmontanus* from U.S permit "A" totalled 233.4kg, and were therefore less than the quantity of 349.5kg imported.

For the same species, France also apparently re-exported a greater quantity of caviar than was imported on US permit denoted as "A" in Table 11. However on closer examination of the permits submitted to UNEP-WCMC, the two permits issued for 60kg had identical importer and exporter details. The caviar label was also identical indicating that the later permit ("U") may have been a re-issue of a previously issued re-export permit ("Q"). This was confirmed by the French Management Authority.

Table 10. Export Permit "A" for *Acipenser transmontanus* caviar originally exported from the United States to France, apparently exceeded by France on re-exports

| | Origin | Country | Importer1 | Importer2 | Importer3 | Permit # | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
|------------------------|--------------------------|---------|-----------|---------------|-----------|----------|---------|--------|---------------|-------------|------------------|
| Original Export | United States | France | | | | B | T | F | 06/06/07 | 349.54 | |
| Re-exports from France | United States (Permit A) | France | | United States | | C | T | F | 26/05/08 | 190.0 | 190.0 |
| | | | | United States | | D | T | F | 12/06/08 | 171.4 | 361.4 |
| | | | | United States | | E | T | F | 07/07/08 | 43.4 | 404.8 |

Total Re-exported Amount Exceeded 404.80 kg 55.26 kg

Table 11. Export Permit "A" for *Acipenser transmontanus* caviar originally exported from the United States to France, apparently exceeded by France on re-exports

| Origin Country | | Importer1 | Importer2 | Permit # | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
|------------------------|--------------------------|-------------------------------------------------|-----------|----------|---------|--------|---------------|-----------------------------------|-----------------------|
| Original Export | United States | France | | A | T | F | 10/10/2007 | 130.0 | |
| | United States (Permit A) | | | | | | | | |
| Re-exports from France | France | Canada | | B | T | F | 04/04/2008 | 9.0 | 9.0 |
| | | Australia | | C | T | F | 15/04/2008 | 1.44 | 10.44 |
| | | Switzerland | | D | T | F | 28/04/2008 | 2.4 | 12.84 |
| | | Monaco | | E | T | F | 19/05/2008 | 0.3 | 13.14 |
| | | Canada | | F | T | F | 20/05/2008 | 10.0 | 23.14 |
| | | Thailand | | G | T | F | 26/05/2008 | 0.09 | 23.23 |
| | | Monaco | | H | T | F | 29/05/2008 | 0.15 | 23.38 |
| | | Republic of Korea | | I | T | F | 03/06/2008 | 0.43 | 23.81 |
| | | Japan | | J | T | F | 03/06/2008 | 0.23 | 24.04 |
| | | Monaco | | K | T | F | 13/06/2008 | 3.89 | 27.93 |
| | | Hong Kong, Special Administrative Region, China | | L | T | F | 16/06/2008 | 0.88 | 28.81 |
| | | Republic of Korea | | M | T | F | 24/06/2008 | 0.43 | 29.24 |
| | | Japan | | N | T | F | 24/06/2008 | 0.23 | 29.47 |
| | | Norway | | O | T | F | 24/06/2008 | 5.0 | 34.47 |
| | | Australia | | P | T | F | 30/06/2008 | 3.8 | 38.27 |
| | | United States | | Q | T | F | 07/07/2008 | 60.0 | 98.27 |
| | | Monaco | | R | T | F | 08/07/2008 | 0.06 | 98.33 |
| | | Monaco | | S | T | F | 08/07/2008 | 0.09 | 98.42 |
| | | United Arab Emirates | | T | T | F | 18/08/2008 | 0.1 | 98.52 |
| | | United States | | U | T | F | 20/08/2008 | 60.0 | 158.52 |
| | | | | | | | | Total Re-exported Amount Exceeded | 158.52 kg 28.52 kg |

7. *Huso dauricus*

Caviar from *Huso dauricus* imported to the EC during 1998-2006 was exclusively from wild stocks (Figure 13). The EC was a significant importer in 2000; the export quotas for China and the Russian Federation were 3430kg and 6000kg respectively in that year.

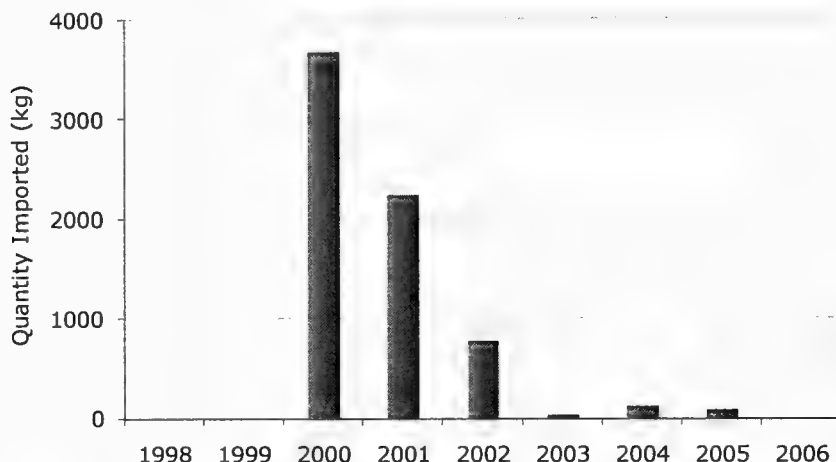


Figure 13. EC-Reported imports *Huso dauricus* caviar (kg) from wild sources, 1998-2006

From the shared Amur River stock of *Huso dauricus*, China and the Russian Federation reported exporting an excess of 929kg caviar beyond their collective quotas during 1998-2001 (Table 12). Since 2001, where quotas have been published by the range States, exports have remained within quota (Annex B).

Table 12. Incidences of range States exceeding their export quotas (blue highlight) for *Huso dauricus*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|--------------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| China | 1998 | N/R | 4481.3 | 3841.2 | | | | 1100.0 |
| China | 1999 | 3430 | 3546.7 | 1522.9 | 116.7 | | | 290.0 |
| Russian Federation | 1999 | 3500 | 3632.8 | 1092.8 | 132.8 | | | |
| China | 2001 | 3430 | 4110.0 | 2175.1 | 680.0 | | | |
| China | 2004 | N/P | 1219.4 | 1219.4 | | | | 112.5 |
| China | 2005 | N/P | 845.4 | 845.4 | 845.4 | 845.4 | | |
| Russian Federation | 2005 | N/P | | 648.0 | | 648.0 | 648.0 | |
| TOTALS | | | | | 929.5 | 1493.4 | | |

N/R denotes a quota was not required; N/P denotes no quota published

Permit tracking for *H. dauricus* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

8. *Acipenser nudiiventris*

Acipenser nudiiventris was imported to the EC entirely from wild sources (Figure 14) between 1998-2006.

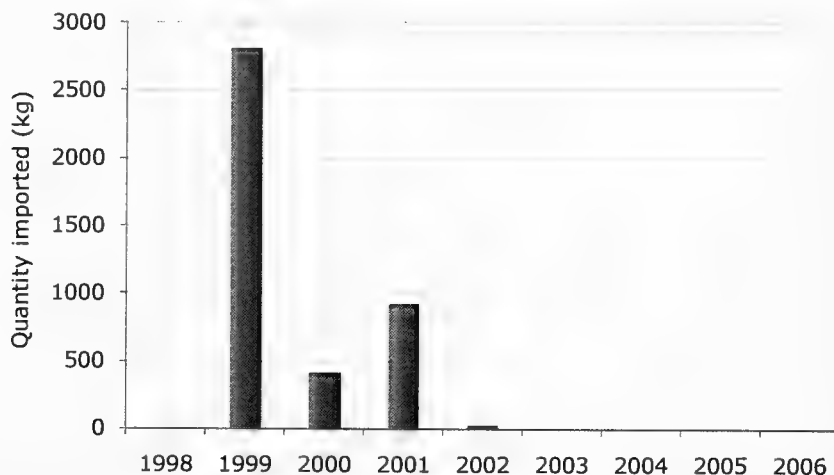


Figure 14. EC-reported imports *Acipenser nudiiventris* caviar (kg) from wild sources, 1998-2006

Importer data indicates that Kazakhstan exceeded their export quota in 2001 (Table 13). Kazakhstan's reported exports exceeded their export quota in 2002, the EC did not report any imports of this species in these years.

Table 13. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser nudiiventris*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|---------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| Iran | 1998 | N/R | | 510.1 | | | | |
| Kazakhstan | 2001 | 2500 | 2417.0 | 2520.0 | | 20.0 | 103.0 | |
| Iran | 2002 | N/R | 82.7 | 82.7 | | | | |
| Kazakhstan | 2002 | 409 | 595.7 | 299.0 | 186.7 | | | |
| TOTALS | | | | | 186.7 | 20.0 | | |

N/R denotes a quota was not required

Permit tracking for *A.nudiiventris* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

9. *Acipenser schrenckii*

EC-reported imports of *Acipenser schrenckii* between 1998-2006 were entirely wildtaken (Figure 15).

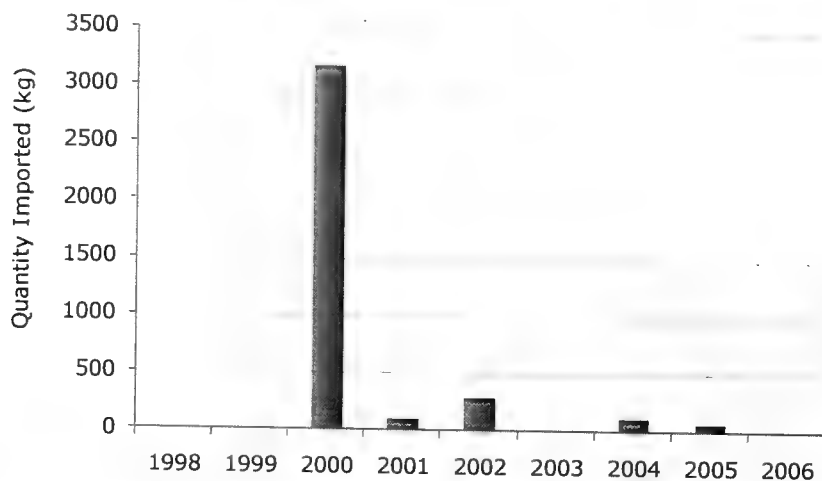


Figure 15. EC-Reported imports *Acipenser schrenckii* caviar (kg) from wild sources, 1998-2006

China and the Russian Federation reported exports of *Acipenser schrenckii* exceeding their quotas. Between 1998 and 2005 this amounted to 4012kg of caviar from the shared stocks of the Amur River, as reported by exporters (Table 14). The EC reported importing 75% of the published quota from the Russian Federation in 2000.

Table 14. Incidences of range States exceeding their export quotas (blue highlight) for *Acipenser schrenckii*, as reported by the exporters and importers, 1998-2007.

| Country | Year | QUOTA (kg) | Export data (kg) | Import data (kg) | Exceeded by exporter (kg) | Exceeded by importer (kg) | Importer data exceeds Exporter data | EC reported direct imports (kg) |
|--------------------|------|------------|------------------|------------------|---------------------------|---------------------------|-------------------------------------|---------------------------------|
| China | 1998 | N/R | 2351.7 | 2600.6 | | | 248.9 | 900.0 |
| China | 1999 | 2510 | 3297.1 | 711.6 | 787.1 | | | 709.8 |
| Russian Federation | 1999 | 1500 | 2975.6 | 2163.8 | 1475.6 | 663.8 | | |
| Russian Federation | 2000 | 2000 | 1773.7 | 2446.0 | | 446.0 | 672.3 | 1503.0 |
| China | 2001 | 2510 | 2620.0 | 1164.9 | 110.0 | | | |
| China | 2004 | N/P | 913.5 | 913.5 | 913.5 | 913.5 | | 123.1 |
| Russian Federation | 2004 | N/P | | 150.0 | | 150 | 150.0 | |
| China | 2005 | N/P | 725.9 | 725.9 | 725.9 | 725.9 | | 69.2 |
| TOTALS | | | | | 4012.1 | 2899.2 | | |

N/R denotes a quota was not required; N/P denotes no quota published

Permit tracking for *A.schrenckii* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

10. *Acipenser baerii*

Imports of *A.baerii* to the EC have been variable, but virtually all of trade reported in 1998-2006 was in captive produced caviar (Figure 16). Imports in caviar from this species increased to 374 kg in 2004 following lower levels of trade, but declined again to 158 kg in 2006. This decrease after 2004 corresponds with the increase in exports of captive produced *A.baerii* caviar from the EC, predominantly by France.

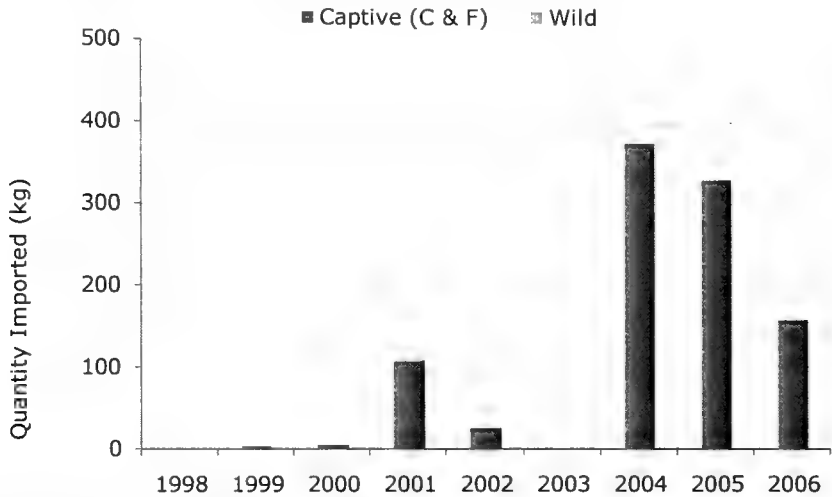


Figure 16. EC-Reported imports of *Acipenser baerii* caviar from wild and captive (Source 'C' and 'F') sources, 1998-2006

Permit tracking for *A.baerii* did not reveal any instances of re-exporters exporting greater quantities of caviar than were reported on the relevant import permits.

11. *Acipenser* spp. & *Acipenseriformes* spp.

The CITES Trade Database was consulted to identify the Parties which traded in caviar at higher taxon names (*Acipenser* spp. or *Acipenseriformes* spp.) during 1998-2006. Four exporters were identified: the Russian Federation and Iran traded in both *Acipenser* spp. and *Acipenseriformes* spp. and Kazakhstan and the United States, which both traded only in *Acipenser* spp.

Table 15. EC-reported imports of caviar at higher taxon levels, 1998-2006 (kg)

| Taxon | Imp. | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Acipenser</i> spp. | | 5232 | 300 | 2 | 852 | 820 | 100 | 100 | 200 |
| <i>Acipenseriformes</i> spp. | | | | 1 | | 5 | 351 | 320 | |

It is not possible to determine the basis for reporting at higher taxon levels from CITES trade data. Individual species may simply not be reported by Parties. Alternatively, the caviar may be derived from a hybrid animal, or is "mixed", combining caviar from two or more sturgeon species.

There are no data available within the Caviar Database for *Acipenser* spp. or *Acipenseriformes* from the exporters, primarily because these countries have not reported any recent caviar trade. It was therefore not possible to track individual permits for caviar traded at higher taxon levels.

V. Compliance with reporting requirements of Conference Resolution 12.7 (Rev. CoP14)

Range States have been required to submit copies of all export permits and re-export permits to the CITES Secretariat or UNEP-WCMC within a month of issue, in accordance with Conf. Res 12.7 (Rev.CoP14), since 2000. In general, the level of compliance for this reporting requirement of the Resolution is good. All EC Member States have apparently been compliant (Table 16). Since accession to the European Community on 01/01/07, Romania has not reported any exports of caviar.

Table 16. Compliance with the reporting requirements for caviar by EC Member States that reported trade

| EC Member State | Producer (P) or Re-exporter (R) | Reporting practise | Compliance with Res. Conf 12.7 (Rev. CoP14) |
|-----------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Belgium | R | Submits copies of re-export permits on a regular basis. | Y |
| Bulgaria | P | Submits copies of export permits regularly. | Y |
| Denmark | R | Submits copies of re-export permits on a regular basis. | Y |
| France | P and R | Several regional departments submit permits directly to UNEP-WCMC. Copies of all permits issued for caviar are submitted to UNEP-WCMC on a monthly basis. | Y |
| Germany | P and R | Submits copies of export and re-export permits on a monthly basis. | Y |
| Italy | P | Submits copies of export permits on a regular basis. | Y |
| Luxembourg | R | Permits were submitted to UNEP-WCMC for 2006. No information has been received subsequently, however Luxembourg is a major importer and distributor of caviar within the EU. | Y |
| Poland | R | Submits copies of re-export permits on a regular basis. | Y |
| Spain | P and R | Submits copies of export and re-export permits on a regular basis. | Y |
| United Kingdom | R | Copies of re-export permits submitted to UNEP-WCMC. | Y |

Of the main exporting range States, Iran and Kazakhstan and have not complied with the reporting requirements (Table 17). The Russian Federation has not submitted any permit details since 2005, and re-export data suggests that no caviar has been exported from the Russian Federation since 2005. China and Azerbaijan, the other key exporters of wild caviar

have submitted copies of permits to UNEP-WCMC on a fairly regular basis. The United States reports exports only irregularly and upon request; Uruguay does not report their exports of captive produced caviar.

Table 17. Compliance with the reporting requirements for caviar by other key exporting Parties

| Country | Producer (P) or Re-exporter (R) | Reporting practise | Compliance with Res. Conf 12.7 (Rev. CoP14) |
|----------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Azerbaijan | P | Permit details generally emailed to UNEP-WCMC within a few days of issue | Y |
| China | P | Submits export permits to UNEP-WCMC on a regular basis | Y |
| Hong Kong, Special Administrative Region, China | R | Copies of re-export permits were submitted to the CITES Secretariat on a quarterly basis throughout 2007 and forwarded to UNEP-WCMC. For 2008, reports have been approximately six monthly. | N |
| Islamic Republic of Iran | P | Does not submit permits to UNEP-WCMC. An e-mail received by the CITES Secretariat indicated that export permits were attached, but the attachments appeared to be html files with no content. | N |
| Kazakhstan | P | Does not submit permits to UNEP-WCMC despite the Secretariat meeting with a Kazakhstani official in 2007. | N |
| Russian Federation | P | Has not submitted permits to UNEP-WCMC since 2005. Re-export data suggests no caviar has been exported from the Russian Federation since that time. | Y |
| Switzerland | R | Since April 2008 permits have been copied to the CITES Secretariat on a monthly basis. All permits issued for re-export of caviar since 2006 have been provided. | Y |
| Turkey | R | No permits have been submitted to either the CITES Secretariat or UNEP-WCMC. Turkey re-exported caviar up to early 2006, but there is no indication that this trade has continued | ? |
| United Arab Emirates | R | Submits copies of re-export permits on a regular basis | Y |
| United States | P | The United States has provided copies of specific export permits at the request of UNEP-WCMC, however there is no mechanism in place for regular transmission of permits | N |
| Uruguay | P | Does not submit permits to UNEP-WCMC | N |

VI. Conclusions

Member States of the European Community are significant importers of caviar; one third to a half of the global market share during 1998-2006 was imported to the EC. Caviar imported in the highest volumes to the EC over this period was derived from the species *Acipenser persicus*, *A. stellatus* and *A. gueldenstaedtii*. Overall, the majority of imports to the EC during 1998-2006 were of wild sourced specimens (Engler & Knapp, 2008), yet imports of wild caviar over the same period decreased for all species except *Polyodon spathula*. In contrast, EC imports of captive produced caviar during 1998-2006 showed an increasing trend; imports were predominantly comprised the species *A. transmontanus* and *A. baerii*. Export levels from the EC were variable, but 64% of exports during 1998-2006 were captive bred *Acipenser baerii* primarily originating in France, with captive bred *Acipenser transmontanus* accounting for 34% of the remainder.

Several range States exporting wild caviar demonstrated a lack of quota compliance during the period under review. Substantial quantities of caviar were traded over the quota levels, as reported by either the exporting range States or the importing Parties, or both. These were most significant for Caspian Sea sturgeon species, *Huso huso*, *Acipenser stellatus* and *A. gueldenstaedtii*, and for Amur River *A. schrenckii*, all of which are currently categorized by the IUCN as Endangered. The EC imported a large proportion of the trade in years where quotas for these species were exceeded. In two instances, the EC Member States collectively imported the entire published quota, as well as additional quantities. These were *Huso huso* from Iran in 2003, and *Acipenser gueldenstaedtii* from Azerbaijan in 2005. The difficulty for an importing party is that they are not able to determine if a range State is effectively managing its quota for the current quota year. This highlights the requirement for a near-real time analysis tool for the caviar trade to act as an early warning system to help prevent such incidences from occurring.

The Caviar Database was established in 2007 and allows, for the first time, detailed analysis of the caviar trade to be undertaken. Analysis of trade within the Caviar Database indicates that for 2007, no published export quotas for wild caviar were exceeded, demonstrating increased quota compliance by the range States. However, it is important to note that several exporting Parties, notably Iran and Kazakhstan do not report on caviar exports to either UNEP-WCMC or the CITES Secretariat.

Tracking of CITES permits to identify possible illicit trade in caviar was undertaken as part of this analysis. The volume of trade reported within the Caviar Database for the years 2005-8 and the fact that trade routes for caviar can be convoluted and unpredictable makes analysis particularly complicated. For example, one caviar consignment originating in the EC was exported to the Middle East, re-imported to another EC Party and again re-exported from the EC. Furthermore, it was not possible to determine if all re-exports of caviar were at levels lower than the quantities originally imported to that country (or collectively by the EU) if details of the original permit were not included within the database. This could be due to the exporting Party providing no details of the permits or the original export taking place prior to 2004.

Permit tracking highlighted several apparent occurrences of potential illegitimate use of CITES permits for wild and captive produced caviar. Whilst it was not possible to track all permits within the Caviar Database, this report identified eight discrepancies by focusing only on key species traded to the EC, during the years 2005-2008. All were subsequently clarified by the Management Authorities of EC Member States and other exporting Parties.

The quantity of wild *A. stellatus*, for example, reported re-exported by the United Arab Emirates exceeded the quantity of caviar imported according to the permit data available. Luxembourg alone appeared to have imported a greater quantity of caviar from the UAE than was originally re-exported to the UAE. Subsequently the Management Authority of the UAE clarified that this discrepancy had occurred as a result of the inclusion of a cancelled permit within the Caviar database. It must be recognised that the Caviar Database records permits issued, and not necessarily permits used. It is therefore entirely possible that details of cancelled or unused caviar permits are held within the database. Should UNEP-WCMC or the CITES Secretariat not be notified of the cancellation of permits, the Caviar Database will overestimate the trade accordingly. Similarly, if replacement permits are subsequently issued by the exporter and also included within the Caviar Database, an even greater over-estimation of the re-export trade will result.

The Caviar Database also indicated that Switzerland re-exported greater quantities of *A. stellatus*, *A. gueldenstadtii* and *Huso huso* in 2007-2008 than was originally imported from Azerbaijan including to EC Member States. Again, this was explained by issued permits not being used. Additional discrepancies in re-exports were apparent for wild *Polyodon spathula* originating in the United States and re-exported from two Member States, Belgium and Spain. One cancelled permit explained this discrepancy. Finally, France apparently re-exported a greater quantity of captive produced *Acipenser transmontanus* originating from the United States than was imported. Whilst none of the permits were cancelled or unused, the quantity of caviar re-exported was reduced on one permit. Total re-exports were therefore at a level below the quantities imported.

In addition to the difficulties in obtaining follow-up information on whether a permit issued was cancelled or unused, lack of permit information from key range states also constrained the analysis. Non-compliance of reporting requirements of Conf. Res. 12.7 (Rev. CoP14) by key exporting range States such as Iran and Kazakhstan despite regular reminders published by the CITES Secretariat (through notifications 2007/30 and 2008/037) undermines the overall effectiveness of the Caviar Database. Until such time that all exporting Parties report on caviar trade there will be significant gaps within the data, and accordingly any analysis will be incomplete. However, Member States of the EC have been compliant with the reporting requirements of Conf. Res. 12.7 (Rev. CoP14).

Despite increased quota compliance by range States, there remains a need for a tool to track valid caviar permits within global trade in near real-time for both wild and captive produced caviar. It has been demonstrated that the Caviar Database is an effective tool to highlight permit discrepancies. There is a requirement to complete further analysis of all caviar trade data, for all species and all sources held within the Caviar Database, and for

continual monitoring of permits within trade. For a complete analysis, historic data from 2005 onwards will be added to the Caviar Database so that where possible, all re-exports can be traced to previous permits.

UNEP-WCMC is currently further developing the online Caviar Database to enable more effective monitoring and tracking of caviar within trade by CITES Management Authorities. The database will be searchable by species, country of origin, year of (re-)export or permit number. The cumulative quantities of caviar reported (re-)exported from the chosen selection will be displayed, allowing the importing MA to check that quotas have not been exceeded, or quantities re-exported are not greater than those imported.

It is clear that there is some trade, as reported by both exporters and importers, in caviar at higher taxon levels. Permits which simply record caviar at higher taxon levels and do not specify the species concerned should be rejected, in accordance with Conference Resolution 12.3 (Rev. CoP14).

Where UNEP-WCMC or the CITES Secretariat are provided with copies of permits for caviar from hybrid sturgeon that specify the exact species concerned, the specific hybrids can be included within the Caviar Database. If Parties include hybrids in their annual reports, data will also be entered into the Trade Database as such.

It is apparent that trade in mixed caviar requires further discussion to determine the most appropriate way of reporting this trade. Currently, the relative quantities of species are not recorded on permits of mixed caviar.

Recommendations

1. UNEP-WCMC or the CITES Secretariat are informed of the details of caviar permits which are cancelled or returned unused to Management Authorities, so that the Caviar Database can be amended accordingly.
2. Where it is apparent that the actual trade level was less than the quantity issued on the permit, UNEP-WCMC or the CITES Secretariat are provided with the customs stamped copy of the permit so that the Caviar Database can be amended to reflect actual trade levels.
3. Member States issuing semi-complete permits for caviar should submit the details of the completed permits, including country of destination and quantity in kg, to UNEP-WCMC or the CITES Secretariat once they are returned to the Management Authority, for inclusion within the Caviar Database.
4. Member States do not accept or issue permits for caviar at higher taxon levels (e.g. *Acipenser* spp. or *Acipenseriformes* spp) where permits do not specify the species concerned. Annual reports should report on trade in hybrids for inclusion in the Trade Database, rather than at higher taxon levels. However, the issue of reporting

trade in mixed caviar would benefit from further discussion at a Management Committee meeting.

5. The Commission liaise with the Secretariat regarding range State non-compliance with the reporting requirements of Conf. Res. 12.7 (Rev.CoP14).

References

IUCN 2007. *2007 IUCN Red List of Threatened Species*. <www.iucnredlist.org>. Downloaded on 03 October 2008.

Kottelat, M. & Freyhof, J. 2007. *Handbook of European Freshwater Fishes*. The World Conservation Union (IUCN). Switzerland.

Pikitch, E.K., Doukakis, P., Lauck, L., Chakrabarty, P., & Erickson, D.L. 2005. Status, trends and management of sturgeon and paddlefish fisheries. *Fish and Fisheries* 6, 233–265.

Annex A

Table 1. Export Permit (A) for *Acipenser stellatus* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

| Exports | | | | | | | | | | |
|-----------------------------|-----------------------|-------------|-----------|-----------|----------|---------|--------|---------------|-------------|------------------|
| | Origin Country | Importer1 | Importer2 | Importer3 | Permit # | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
| Original Export | Azerbaijan | Switzerland | | | A | T | W | 05/12/07 | 115.39 | |
| Re-exports from Switzerland | Azerbaijan (Permit A) | Switzerland | France | | B | T | W | 12/12/07 | 54.29 | 54.29 |
| | | | Italy | | C | T | W | 12/12/07 | 20.38 | 74.67 |
| | | | Germany | | D | T | W | 12/12/07 | 20.23 | 94.9 |
| | | | Belgium | | E | T | W | 12/12/07 | 20.49 | 115.39 |
| | | | Belgium | | F | T | W | 20/01/08 | 20.38 | 135.77 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Table 2. Export Permit "A" for *Acipenser gueldenstaedtii* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

| on re-exports | | | | | | | | | | |
|-----------------------------|----------------|-------------|-----------|-----------|----------|---------|--------|---------------|-----------------------------------|-----------------------|
| | Origin Country | Importer1 | Importer2 | Importer3 | Permit # | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
| Original Export | Azerbaijan | Switzerland | | | A | T | W | 05/12/07 | 386.52 | |
| Re-exports from Switzerland | Azerbaijan (A) | Switzerland | Spain | | G | T | W | 12/12/07 | 20.65 | 20.65 |
| | | | France | | B | T | W | 12/12/07 | 121.78 | 142.43 |
| | | | Italy | | C | T | W | 12/12/07 | 40.58 | 183.01 |
| | | | Germany | | D | T | W | 12/12/07 | 122.34 | 305.35 |
| | | | Belgium | | E | T | W | 12/12/07 | 60.88 | 366.23 |
| | | | Belgium | | F | T | W | 20/01/08 | 40.58 | 406.81 |
| | | | | | | | | | Total re-exported Amount Exceeded | 406.81 kg 20.29 kg |

Table 3. Export Permit "A" for *Huso huso* caviar originally exported from Azerbaijan to Switzerland, apparently exceeded by Switzerland on re-exports

| Origin Country | | Importer1 | Importer2 | Importer3 | Permit # | Purpose | Source | Date of Issue | Amount (kg) | Cumulative Total |
|-----------------------------|----------------|-------------|-----------|-----------|----------|---------|--------|---------------|-------------|------------------|
| Original Export | Azerbaijan | Switzerland | | | A | T | W | 05/12/07 | 3.38 | |
| Re-exports from Switzerland | Azerbaijan (A) | Switzerland | Italy | | C | T | W | 12/12/07 | 3.38 | 3.38 |
| | | | Belgium | | D | T | W | 20/01/08 | 3.38 | 6.76 |

Total re-exported
Amount Exceeded

6.76 kg
3.38 kg

Annex B: Quota Compliance for Wild Caviar by Country of Origin based on Permits Issued (not actual trade), 1998-2007.
Highlighted areas indicate quotas were exceeded. Data was corrected for end of year trade.

Azerbaijan

| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|----------------------------------|------|------------|------------------|------------------|
| <i>Acipenser gueldenstaedtii</i> | 2000 | | 604.7 | 305 |
| | 2001 | 3450 | 2047.2 | 2047 |
| | 2002 | 2770 | 1845.51 | 1566.51 |
| | 2003 | 4200 | 3694.54 | 2693.04 |
| | 2004 | 3780 | 4783.08 | 5016.18 |
| | 2005 | 3780 | 5732.26 | 5357.68 |
| | 2006 | N/P | | |
| | 2007 | 3360 | 2829.7 | |
| <i>Acipenser stellatus</i> | 2008 | 3360 | 1174.49 | |
| | 2000 | | 305 | 205 |
| | 2001 | 2840 | 817.2 | 817 |
| | 2002 | 2470 | 1278.35 | 1026.35 |
| | 2003 | 4500 | 3510.24 | 2731.29 |
| | 2004 | 2700 | 4849.42 | 4549.92 |
| | 2005 | 2700 | 3743.724 | 3323.044 |
| | 2006 | N/P | | |
| <i>Huso huso</i> | 2007 | 3000 | 775.82 | |
| | 2008 | 3000 | 893.98 | |
| | 2000 | | 145.8 | 90 |
| | 2001 | 520 | 146.8 | 147 |
| | 2002 | 530 | 332.43 | 314.43 |
| | 2003 | 400 | 561.9 | 362.05 |
| | 2004 | 250 | 291.48 | 216.28 |
| | 2005 | 250 | 372.776 | 458.976 |
| | 2006 | N/P | | |
| | 2007 | 300 | 300 | |
| | 2008 | 300 | 125.65 | |

| Bulgaria | | | | |
|----------------------------------|-------------|-------------------|-------------------------|-------------------------|
| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
| <i>Acipenser gueldenstaedtii</i> | 2000 | | 25.4 | 3 |
| | 2001 | 50 | | |
| | 2002 | 20 | 9 | |
| | 2003 | 20 | 15 | 15 |
| | 2004 | N/P | | |
| | 2005 | 0 | | 25.05 |
| <i>Acipenser ruthenus</i> | | | | |
| <i>Huso huso</i> | 2000 | | 14.8 | |
| | 1998 | | 2392 | 1717.2 |
| | 1999 | 2400 | 2025.4 | 1937.8 |
| | 2000 | 2500 | 2747.5 | 2275.6 |
| | 2001 | 2450 | 991.55 | 985 |
| | 2002 | 1720 | 2327.8 | 1971 |
| | 2003 | 1720 | 1548.41 | 1548 |
| | 2004 | 1720 | 1008.39 | 994.83 |
| | 2005 | 1460 | | 1416.66 |
| | 2006 | 1000 | 666.663 | 666.663 |

China

| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|-----------------------------|------|------------|------------------|------------------|
| <i>Acipenser schrenckii</i> | 1998 | | 2351.686 | 2600.6 |
| | 1999 | 2510 | 3297.127 | 711.59 |
| | 2000 | 2510 | 25 | 1200 |
| | 2001 | 2510 | 2620 | 1164.87 |
| | 2002 | 2510 | 1756.08 | 1756.08 |
| | 2003 | 2510 | 1126.23 | 754.33 |
| | 2004 | N/P | 913.505 | 913.505 |
| | 2005 | N/P | 725.902 | 725.902 |
| | 2006 | N/P | | |
| | 2007 | 1337 | | |
| <i>Huso dauricus</i> | 2008 | 1337 | | |
| | 1998 | | 4481.267 | 3841.2 |
| | 1999 | | 3546.693 | 1522.91 |
| | 2000 | 3430 | 25 | 1725 |
| | 2001 | 3430 | 4110 | 2175.13 |
| | 2002 | 3430 | 2432.67 | 2432.67 |
| | 2003 | 3430 | 1179.16 | 787.16 |
| | 2004 | N/P | 1219.356 | 1219.355 |
| | 2005 | N/P | 845.449 | 845.449 |
| | 2006 | N/P | | |
| | 2007 | 1672 | | |
| | 2008 | 1595 | | |

| Iran* | | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|--------------------------------------------|--|------|------------|------------------|------------------|
| <i>Acipenser gueldenstaedtii</i> | | | | | |
| | | 1998 | | 54005.59 | 50894.208 |
| | | 1999 | 14000 | 9052.5 | 9799.97 |
| | | 2000 | **52000 | 15186.9 | 17588.28 |
| | | 2001 | 3460 | 1793.36 | 1900.67 |
| | | 2002 | 2100 | 2363.742 | 2535.866 |
| | | 2003 | 1950 | 1696.202 | 1675.483 |
| | | 2004 | 1755 | 586.592 | 806.155 |
| | | 2005 | 1600 | 58.621 | 328.106 |
| | | 2006 | N/P | | |
| | | 2007 | 1000 | | 299.544 |
| | | 2008 | 1000 | | |
| <i>Acipenser nudiiventris</i> | | | | | |
| | | 1998 | | | 510.074 |
| | | 1999 | | | |
| | | 2000 | | | |
| | | 2001 | 1000 | 916 | 914.34 |
| | | 2002 | | 82.73 | 82.73 |
| <i>Acipenser persicus</i> | | | | | |
| | | 1998 | | 2269.83 | 8442.9 |
| | | 1999 | 53000 | 44380.39 | 34920.08 |
| | | 2000 | **52000 | 30886.1 | 35498.855 |
| | | 2001 | 51000 | 39000.99 | 38779.59 |
| | | 2002 | 55890 | 34544.526 | 34612.351 |
| | | 2003 | 63000 | 39018.827 | 37476.598 |
| | | 2004 | 56700 | 10636.65 | 31439.289 |
| | | 2005 | 51000 | 664.514 | 11727.66 |
| | | 2006 | 44370 | | 8661.367 |
| | | 2007 | 38000 | | 3825.45 |
| | | 2008 | 37000 | | |
| <i>Acipenseridae spp. (pressed caviar)</i> | | | | | |
| | | 1998 | | | 7976.95 |
| | | 1999 | | | 5381 |
| | | 2001 | 1000 | 860 | 847.21 |

Iran*

| Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|----------------------------|------------|------------------|------------------|
| 2002 | 1000 | 915.46 | 916 |
| 2003 | 1000 | 705 | 390 |
| 2004 | 1000 | 400 | 420 |
| 2005 | 1000 | | 280 |
| 2006 | N/P | | |
| 2007 | 1000 | | |
| <i>Acipenser stellatus</i> | | | |
| 1998 | | 36466.85 | 41847.718 |
| 1999 | 40000 | 41598.65 | 38269.45 |
| 2000 | 35000 | 23801.8 | 24108.875 |
| 2001 | 23400 | 21543 | 21486.93 |
| 2002 | 14827 | 9682.671 | 9482.92 |
| 2003 | 11700 | 7733.3 | 7234.676 |
| 2004 | 7020 | 1953.5 | 4173.15 |
| 2005 | 6300 | 87.029 | 1393.729 |
| 2006 | N/P | | |
| 2007 | 3200 | | 976.29 |
| 2008 | 3200 | | |
| <i>Huso huso</i> | | | |
| 1998 | | 2951.747 | 3236.28 |
| 1999 | 3000 | 3530 | 3718 |
| 2000 | 3000 | 3454 | 2360 |
| 2001 | 3950 | 2082 | 2118 |
| 2002 | 2950 | 2641.47 | 2540.266 |
| 2003 | 1720 | 2566.269 | 2369.388 |
| 2004 | 1065 | 791 | 939 |
| 2005 | 1065 | 18 | 676.45 |
| 2006 | N/P | | |
| 2007 | 1000 | | 822 |
| 2008 | 1000 | | |

*Iran did not report caviar exports in their 2005 Annual Report, but available permits submitted to UNEP-WCMC by Iran have been included;

**Total quota for *A. gueldenstaedtii* and *A. persicus* combined was 52000 kg. This was exceeded according to importers with a reported total of 53087kg.

Kazakhstan

| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|----------------------------------|------|------------|------------------|------------------|
| <i>Acipenser gueldenstaedtii</i> | 1999 | | | 78 |
| | 2000 | 7700 | 3728.023 | 3828.68 |
| | 2001 | 3200 | 3837.801 | 3224 |
| | 2002 | 4880 | 5150.46 | 3269.53 |
| | 2003 | 4620.34 | 1758.4 | 382 |
| | 2004 | 3204 | 1873.03 | 1253 |
| | 2005 | 3100 | | 3911.165 |
| | 2006 | N/P | | |
| <i>Acipenser nudiiventris</i> | 2007 | 3270* | 550.236 | |
| | 2008 | 3270* | | |
| | 2000 | 5600 | 1691.43 | 1292.15 |
| | 2001 | 2500 | 2416.98 | 2520 |
| | 2002 | 409 | 595.71 | 299 |
| | 2000 | 14800 | 10795.23 | 13814.215 |
| | 2001 | 20900 | 18708.496 | 19007.998 |
| | 2002 | 19770 | 11176.26 | 6607.3 |
| <i>Acipenser stellatus</i> | 2003 | 26233.72 | 6837.2 | 3510 |
| | 2004 | 11011 | 7757.273 | 3709.7 |
| | 2005 | 10490 | | 13912.561 |
| | 2006 | N/P | | 203.125 |
| | 2007 | 10637* | 1302.781 | |
| | 2008 | 10637* | | |
| | 1999 | | | 1339.91 |
| | 2000 | 8300 | 6778.702 | 6364.7 |
| <i>Huso huso</i> | 2001 | 4200 | 7135.614 | 6681.84 |
| | 2002 | 5956 | 3473.27 | 2393.52 |
| | 2003 | 8531.78 | 1084 | 457.11 |
| | 2004 | 2360 | 693.094 | 209 |
| | 2005 | 2600 | | 4602.6 |
| | 2006 | N/P | | 198.934 |
| | | | | |
| | | | | |

| | | |
|------|-------|---------|
| 2007 | 1761* | 949 547 |
| 2008 | 1761* | |

*Includes quotas for Turkmenistan (non-CITES party); 200kg for *Acipenser gueldenstedtii*, 2137kg for *Acipenser stellatus*, 61kg for *Huso huso*.

| Romania | | | | |
|----------------------------------|------|------------|------------------|------------------|
| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
| <i>Acipenser gueldenstaedtii</i> | 1998 | | 389 | 410 |
| | 1999 | 1250 | 1123 | 1085 |
| | 2000 | 1800 | 1434 | 1137 |
| | 2001 | 1750 | 709 | 865 |
| | 2002 | 1200 | 587 | 376 |
| | 2003 | 900 | 257 | 155 |
| | 2004 | 160 | 80 | 77 |
| | 2005 | 160 | 7 | 7 |
| | | | | |
| <i>Acipenser stellatus</i> | 1998 | | 326 | 327 |
| | 1999 | 2000 | 1710 | 1501 |
| | 2000 | 2100 | 2117 | 1941 |
| | 2001 | 2050 | 1147 | 1174 |
| | 2002 | 1470 | 934 | 825 |
| | 2003 | 1100 | 351 | 287 |
| | 2004 | 900 | 138 | 138 |
| | 2005 | 900 | 56 | 56 |
| | | | | |
| <i>Huso huso</i> | 1998 | | 873 | 533 |
| | 1999 | 1750 | 1757 | 1709 |
| | 2000 | 3200 | 3200 | 3467 |
| | 2001 | 3100 | 1789 | 2009 |
| | 2002 | 2180 | 2387 | 1879 |
| | 2003 | 2250 | 2169 | 1732 |
| | 2004 | 2250 | 1786 | 1529 |
| | 2005 | 2000 | 1035 | 815 |
| | | | | |

Russian Federation

| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
|----------------------------------|------|------------|------------------|------------------|
| <i>Acipenser gueldenstaedtii</i> | 1998 | 69000 | 40951.218 | 23175.924 |
| | 1999 | 40000 | 24920.731 | 18158.731 |
| | 2000 | 34090 | 18341.082 | 21399.788 |
| | 2001 | 28300 | | 8748.723 |
| | 2002 | 28070 | | 9092.571 |
| | 2003 | 17200 | | 2039.201 |
| | 2004 | 14580 | | 1047.669 |
| | 2005 | 14000* | | |
| | 2007 | 20000 | | |
| | 2008 | 22619* | | |
| <i>Acipenser schrenckii</i> | 1998 | 1700 | 1385.05 | 1385.2 |
| | 1999 | 1500 | 2975.6 | 2163.8 |
| | 2000 | 2000 | 1773.7 | 2446 |
| | 2001 | 2140 | | 1355.4 |
| | 2002 | 350 | | 350 |
| | 2003 | 350 | | 349.8 |
| | 2004 | N/P | | 150 |
| | 2007 | 1900 | | |
| | 2008 | 350 | | |
| <i>Acipenser stellatus</i> | 1998 | 85000 | 20580.501 | 12231.167 |
| | 1999 | 42000 | 14564.142 | 12085.561 |
| | 2000 | 39350 | 9419.328 | 9610.677 |
| | 2001 | 27500 | | 13525.182 |
| | 2002 | 16850 | | 9693.976 |
| | 2003 | 13800 | | 1600.385 |
| | 2004 | 8280 | | 1694.951 |

| | | | | |
|---------------------------|------|-------|----------|----------|
| | 2005 | 8000* | | |
| | 2007 | 3500 | | |
| | 2008 | 3540* | | |
| <i>Acipenser ruthenus</i> | 2005 | 100 | | |
| <i>Huso dauricus</i> | 1998 | 3600 | 2757.6 | 1616.2 |
| | 1999 | 3500 | 3632.8 | 1092.8 |
| | 2000 | 6000 | 5451.7 | 4676.65 |
| | 2001 | 7000 | | 4952.6 |
| | 2002 | 2300 | | 1188.6 |
| | 2003 | 1000 | | 570 |
| | 2004 | N/P | | 0 |
| | 2005 | N/P | | 648 |
| | 2007 | 2560 | | |
| | 2008 | 1280 | | |
| <i>Huso huso</i> | 1998 | 5000 | 2049.52 | 3029.36 |
| | 1999 | 3000 | 451.192 | 961.698 |
| | 2000 | 3500 | 2171.901 | 2585.483 |
| | 2001 | 3800 | | 1678.634 |
| | 2002 | 1800 | | 1299.889 |
| | 2003 | 2500 | | 156.79 |
| | 2004 | 800 | | 101.335 |
| | 2005 | 600 | | |
| | 2007 | 700 | | |
| | 2008 | 700 | | |

*Includes quotas for Turkmenistan (non-CITES party): 1200kg for *Acipenser gueldenstaedtii* (2005) and 2619kg (2008), 800kg for *Acipenser stellatus* (2005) and 40kg (2008).

| United States | | | | |
|-------------------------------------|------|------------|------------------|------------------|
| | Year | QUOTA (kg) | Export data (kg) | Import data (kg) |
| <i>Acipenser transmontanus</i> | 1998 | | 1 | |
| | 1999 | | 23 | 68 |
| | 2001 | 3500 | 418.34 | 568.86 |
| | 2002 | 0 | 582 | 564 |
| | 2003 | 0 | 227 | 1209.79 |
| | 2004 | | 2577 | 373 |
| | 2005 | | 2215.57 | 2993.32 |
| | 2006 | | 3312 | 3025 |
| | 2007 | | | 2854.11 |
| | 1998 | | | 3.99 |
| <i>Polyodon spathula</i> | 1999 | | | |
| | 2000 | | 3065.95 | 1193.63 |
| | 2001 | 7700 | 1946.82 | 1084.47 |
| | 2002 | | 2627.53 | 2639.09 |
| | 2003 | | 4380.79 | 4476.6 |
| | 2004 | | 4401.38 | 4108.14 |
| | 2005 | | 4160.34 | 5017.86 |
| | 2006 | | 8591.83 | 6215.45 |
| | 2007 | | | 7022.94 |
| | 2003 | | 20 | |
| <i>Scaphirhynchus platyrhynchus</i> | 2004 | | 48.454 | 48.384 |
| | 2005 | | | |
| | 2006 | | 208 | |
| | | | | |

